TELEVISION INQUIRY

UNIVERSITY OF MICHIGAN
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HEARINGS

BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE UNITED STATES SENATE

EIGHTY-FIFTH CONGRESS

SECOND SESSION

PURSUANT TO

S. Res. 224

AUTHORIZING THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE TO INVESTIGATE CERTAIN MATTERS UNDER ITS JURISDICTION AND ON

S. 376

A BILL TO AUTHORIZE THE FEDERAL COMMUNICATIONS COMMISSION TO ESTABLISH RULES AND REGULATIONS AND MAKE ORDERS WITH RESPECT TO NETWORKS AND THEIR ACTIVITIES

June 26, 1958

PART 7

THE TELEVISION RATING SERVICES

Printed for the use of the Interstate and Foreign Commerce Committee

UNITED STATES
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Hearings held during the 84th and 85th Congresses in connection with the television inquiry, including testimony on S. 825, by Mr. Bricker, to authorize the Federal Communications Commission to establish rules and regulations and make orders with respect to networks and their activities, were printed in six volumes, as follows:

Part I: UHF–VHF Allocations Problem (testimony of Federal Commission), 84th Congress

Part II: UHF–VHF Allocations Problem, 84th Congress

Part III: Subscription Television, 84th Congress

Part IV: Network Practices, 84th Congress

Part V: Allocations—Testimony of Federal Communications Commission Additional Supplement on Network Practices, 85th Congress

Part VI: Review of Allocations Problem and Special Problems of TV Service to Small Communities, and S. 376, 85th Congress

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TELEVISION INQUIRY

The Television Rating Services

THURSDAY, JUNE 26, 1958

UNITED STATES SENATE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 a.m., in room G–16, U.S. Capitol Building, Hon. A. S. Mike Monroney presiding.

Present: Senators Monroney and Schoeppel.

Also present: James E. Bailey, assistant chief counsel; Kenneth A. Cox, special counsel; Nicholas Zapple, staff communications counsel.

Senator MONRONEY. The committee will be in order. This morning we are turning to a new phase of our continuing television inquiry; namely, the television rating services.

During the course of its investigation of television, the committee has received a number of inquiries and complaints concerning the national program rating services. These have given rise to questions as to the possible effect of such ratings upon the quality of the program service being furnished the public. Other questions are presented concerning the possible misuse of rating information in station and network advertising.

Something of the committee's concern is reflected in the statement in Time magazine on January 14, 1957, reading as follows:

> However they may be improved, the rating systems and their tyranny over TV hold no hope for the viewer who believes that the verdict of democracy is fine for Government but folly for television. The viewer is both the unwilling culprit and the ultimate victim of the tyranny. The ratings discourage worthy programs that might make a deeply favorable—but unmeasurable—impression (including sales impact), but that do not attract measurably high numbers. They inspire imitations of high-rated programs, touching off cycles of the second rate.

It is not the desire of the committee to interfere unduly in the conduct of an essentially private business. Our only concern is with the possible impact of ratings on the service the public receives and upon the overall development of the television industry.

Before hearing from our first witness, we have a number of documents for insertion in the record. I will ask Mr. Cox to identify these at this time.

Mr. Cox. Thank you, Senator.

The first is a letter addressed by Senator Magnuson to the various rating services under date of March 27, 1957, which inaugurated the committee's interest in this question.

The replies received to that were tabulated by the Library of Congress, and we have here a large, two-page table in which they have

tabulated the replies with respect to at least the five companies which are appearing here today; and with this is a textual supplement with respect to certain of their subsidiary services. We received from three of the companies—the A. C. Nielsen Co., Videodex, and Trendex—letters adding to or correcting items in the chart.

We also have for insertion in the record letters from the Chairman of the Federal Trade Commission, under date of June 21, 1957, and June 20, 1958, in response to inquiries from the committee as to the possible jurisdiction of the Trade Commission with respect to false advertising using rating results.

The final item is a letter from Miles A. Wallach, president of TPI Ratings, Inc., dated June 13, 1958, and an attached study of TV viewing in Syracuse, N.Y., for a week in March of this year.

(The documents referred to are as follows:)

SENATE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
March 27, 1957.

GENTLEMEN: The Senate Committee on Interstate and Foreign Commerce has been conducting an extensive study, involving lengthy hearings, with respect to the development of the entire television industry. During the conduct of this study, it has received a number of inquiries or complaints concerning the national rating services which now provide television program ratings. These have given rise to certain questions as to the possible effect of such ratings upon the program service being furnished the public.

It is certainly not my desire to interfere in any way with your conduct of what is essentially a private business; my only concern is with the possible impact of ratings upon the service the public receives and upon the overall development of the television industry.

It is in this light that I would appreciate receiving the following information about the methods underlying your service:

1. What portion of the United States is covered by your measurements? Please list the specific cities in which your measurements are taken.

2. What services does your company provide to its subscribers? In this connection I would like to know whether you provide a purely national service, a series of local services, a combination of the two, or any other form of published rating information.

3. Please indicate the number of services that you offer to the broadcast industry, such as ratings, sets in use, share of audience, and whether these are provided on an overnight basis, a weekly basis, a monthly basis, or semiannual basis.

4. How large a sample do you employ in collecting the information used for each service indicated in the answer to the preceding question? More particularly, list the number of samples taken in each specific city listed above and the manner in which they are taken.

5. How is the composition of this sample determined? What efforts have been made to make it an accurate cross section of the population in the area being measured? In other words, please spell out the criteria you have employed in developing the same which you use. Is the selection of the sample made locally, or is it done by your national office?

6. Will you please outline in complete detail the methods which you employ in obtaining information as to the programs which the public viewed at the time which you are seeking to measure? Indicate the devices employed, the number and nature of the personnel conducting the survey (if it is done by telephone or personal visit), the time when the measurement is taken in relation to the actual broadcast of the program, and the time required to process this information for publication. If you make telephone calls, are your reports based only on the completed calls? Is the percentage of uncompleted calls published?

7. What effect, if any, does the type of service ordered by a broadcast interest have on the manner in which you conduct your measurements?

8. Does a quantity order by a specific broadcast group have any effect on the manner in which you conduct your measurements?

9. Is any attempt made by your organization to correlate your results with other rating services? If not, why not? If so, how is this done?

10. What are the advantages of your services over those offered by other rating bureaus?

11. In your estimation, what effect, if any, does the publication of your measurements have on the success, or lack of success, of various programs, or on the success or lack of success for a broadcast station in obtaining an account?

12. In what form do you sell your services to subscribers? That is, do they place an order for your service on a regularly recurring basis or do you, upon occasion, conduct special surveys in selected markets, not ordinarily covered, on a specific order from a particular station or other interested party?

13. What percentage of your revenue is received from the business placed with you by the networks, by individual broadcast stations, and by advertising agencies and others?

14. Please furnish any other information which you feel would be necessary and helpful in giving the committee a full and sound understanding of your method of operation and the effect it has on the public and the broadcast industry.

Thank you for your attention to this matter. I will appreciate your furnishing the above information at your earliest convenience.

Cordially yours,

WARREN G. MAGNUSON, *Chairman.*

Television rating services: A comparative analysis of the nationally significant ratings

	A. C. Nielsen Co.	American Research Bureau, Inc.	Videodex, Inc.	The Pulse, Inc.	Trendex, Inc.
Method of gathering data	Electronic recorder (Audimeter).	Viewer diary	Viewer diary	Personal roster-recall	Telephone coincidental (telephone recall when time periods to be covered do not permit telephone coincidental).
Coverage of sample	National sample (excludes approximately 3 percent of U.S. population in sparsely populated areas for reasons of economy).	National sample (all television markets).	National sample (all television markets).	Weighted average of individual market survey which are continually changing in accordance with clients' wishes and company's workload.	15 major cities which can receive 3 "live" network shows simultaneously.
Size of sample and viewing hours surveyed.	950 Audimeters (recorders) with each audimeter recording 2 full weeks of viewing.	1,600 to 1,850 tabulated diaries with each diary recording 1 full week of viewing (out of a base sample of 2,200 diaries).	9,200 tabulated diaries with each diary recording 1 full week of viewing.	67,000 personal interviews per week (minimum) with each interviewee questioned concerning his or her family's television viewing during the day of the interview and the previous evening.	1,000 calls per half hour for all network programs Sunday through Saturday from 8 a.m. until 11 p.m., New York time.
Method of choosing sample	Random sample according to population density with subsample for TV set ownership (methods similar to those employed by U.S. Census Bureau).	Random sample according to population density with subsample for TV set ownership.	Random sample of TV set purchase records. Selection is made at central points of TV set manufacture and distribution.	Modified random probability sample with sample blocks taken from census statistics.	Random telephone sample calculated to reflect TV penetration.
Method of contacting and recruiting sample homes.	Not available	By personal interview (and by mail in rural areas).	By mail	By personal interview (information is obtained in initial interview).	By telephone (information is obtained in initial telephone conversation).
Inducement to encourage sample homes to cooperate.	do	None (except in rural areas where dairy families are given an opportunity to participate in a contest where winners are given $50 savings bonds).	Sample families are offered a premium of their selection after successful completion of their dairy reporting.	None	None.
Periods covered by each survey and frequency of surveys.	2-week periods surveyed 24 times a year.	First week of every month (except where holidays or other events make a change to a different week advisable.) A supplement to standard report provides certain additional data for the 2d week of every month.	1st week of every month	Generally a given week of the month. Some markets are reported monthly and others as infrequently as once a year.	First week of every month.

Change of sample	Permanent sample; changed only to reflect population changes and when sample homes drop out.	New sample each month	⅓ of the sample is new each month; each sample home participates for 7 months.	New sample for each individual survey.	New sample each month.
Method of obtaining information from sample families.	Audimeters containing film cartridges are installed in the TV sets. Every 2 weeks the family removes the film cartridge and mails it to the company. A new film cartridge received from the company is at once inserted in the audimeter to record the next 2-week period.	Diaries are mailed to families from the central office. A personal interview is made just before the period of diary recording to see if diary has been received and to answer any questions. Another interview is made during the middle of the recording week to make sure diary is being properly kept and will be returned promptly.	Diaries are mailed to families from the central office. A personal interview is made just before the period of diary recording to see if diary has been received, to answer any questions, and to explain the premium plan. The initial diary (of the 7 which sample families submit) is not used in the tabulated report. It serves as a qualifying report whereby respondents can demonstrate their comprehension of the diary and its keeping.	An aided-recall system is used in personal interviews made in a sample block whereby respondents are shown TV program schedules for previous parts of the day or for the previous night. Interviewing is usually done between 4 and 8 p.m.	Respondents are telephoned during the time a particular series of programs is being televised. Tabulated results are based on total calls placed, not on the number of completed calls.
Number and type of interviewers.	Not available	Mostly women, many of whom have previously been employed in customer relations departments of large concerns. Area supervisors, normally promoted from the interviewer ranks, train all new interviewers.	Registered interviewers for all counties affected by television.	Number of interviewers varies from 7 or 8 to 40 or 50 depending upon the individual market survey.	Approximately 33 interviewers are used during each half hour of surveying. The interviewers are all women, many of whom are shut-ins.
Information obtained	A minute-by-minute record on film showing when the TV set was turned on and the station to which it was tuned.	Viewers record in the diary the time during which TV was viewed, the station and program viewed, and the number of viewers (men, women, and children under 16).	Viewers record in the diary the time during which TV was viewed, the station and programs viewed, the number of viewers (men, women, children between 13 and 18, and children 12 and under), whether the program was excellent, good, or fair, and whether the commercial was interesting, neutral, or irritable.	Not available	Interviewer asks if anyone is presently watching TV. If answer is "No" he asks if the home has TV. He then asks what program is being watched, what station is being watched, and how many men, women, and children are viewing the program. He also asks the respondent to identify, if possible, the advertiser of the program.
Lapse of time between close of survey period and availability of reported information.	3 weeks (approximately)	3 weeks (approximately)	1 week for advance ratings (approximately); 2 to 3 weeks for published reports.	5 to 6 weeks (normally)	1 week for published reports; 1 week from the date of broadcast for individual programs. Morning after the broadcast for individual programs where subscribers wish to pay the cost of wired results.

Television rating services: A comparative analysis of the nationally significant ratings—Continued

	A. C. Nielsen Co.	American Research Bureau, Inc.	Videodex, Inc.	The Pulse, Inc.	Trendex, Inc.
Monthly ratings measure..	The percentage of all TV homes able to receive the program that had it tuned in for (1) 6 minutes or more; and (2) during an average minute.	The percentage of all TV homes able to receive the program that watched it for 5 minutes or more.	The percentage of all TV homes able to receive the program that watched it for 8 minutes or more.	The percentage of all TV homes able to receive the program that watched it.	The percentage of all TV homes called found watching the program.
Information (in addition to ratings) reported monthly.	Sets in use: total and average per minute. Program coverage: number of TV homes able to receive the program in percent of total U.S. TV homes. Number of stations which transmitted the program. Total U.S. homes reached by each program (projection). Share of audience: percentage of all viewers watching a particular program.	Sets in use: total. Program coverage: number of TV homes able to receive the program in percent of total U.S. TV homes. Number of stations which transmitted the program. Total U.S. homes reached by each program (projection). Total number of viewers and audience composition: men, women, and children under 16. Supplemental monthly report (normally a week following regular report) provides information on new or alternate week programs not reported the week previously, on certain programs with alternate week sponsors, and on competing programs during these time periods.	Sets in use: total. Number of stations which transmitted the program. Total U.S. homes reached by each program (projection). Total number of viewers and audience composition: men, women, children between 13 and 18, and children 12 and under. Time period audience composition.	Sets in use: total.	Sets in use: total. Program coverage: number of TV homes able to receive the program in percent of total U.S. TV homes. Share of audience: percentage of all viewers watching a particular program. Total number of viewers and audience composition (quarterly): men, women, and children. Sponsor index (quarterly): percent of program's audience correctly identifying sponsor, product advertised, or any product of the advertiser.
Sources of revenue (from all TV rating services, both national and local).	Not available	50 percent advertising agencies. 37 percent individual broadcast stations. 5.5 percent networks. 4 percent advertisers. 3.5 percent others.	60 percent advertisers. 4 percent individual broadcast stations. 1 percent networks. 35 percent advertising agencies, syndicated film companies, competitive media, and "all other."	Television revenue accounts for only 20 percent of total revenue derived from company's market research business. Of this 20 percent 25 to 33⅓ percent is from advertising agencies; almost nothing is from networks; and the balance is from individual broadcast stations.	45 percent networks. 35 percent advertising agencies, and "others." 20 percent individual broadcast stations.

Nature of national rating service.	Syndicated service with no special or single interest in any 1 segment of the TV industry.	Emphasizes number and types of viewers as well as number of sets being viewed. Appeals primarily to advertising agencies. (Review from individual broadcast stations is predominantly from local surveys.)	Emphasizes number and types of viewers as well as number of sets viewed. Offers numerous special tabulations and appeals primarily to the sponsor (advertiser).	A compilation of local market-by-market surveys which is used by individual broadcast stations and advertising agencies mostly in the sale and purchase of "spot" advertisements rather than program sponsorships.	A comparative program popularity report which aids subscribers in making judgments on a program's particular format and talent. Only service regularly offering a "sponsor identification index."

Sources: 1. Replies received from A. C. Nielsen Co., American Research Bureau, Inc., Videodex, Inc., the Pulse, Inc., and Trendex, Inc., in response to certain inquiries included in a letter ot Mar. 27, 1957, from Senator Warren G. Magnuson, chairman of the Senate Interstate and Foreign Commerce Committee. 2. "TV's figures won't quite add." Business Week, Sept. 29, 1956. P. 45.

Prepared by John W. Walker, Economics Division, Legislative Reference Service, the Library of Congress.

Television Rating Services

Selected Information on the Local Rating Services Conducted by Those Companies Publishing Nationally Significant Ratings[1]

A. C. NIELSEN CO.

Nielsen coverage service (NCS)

Nature of service: Measures location and intensity of radio and television audiences. Most recent study based on 1956 broadcasting and reception conditions. Data based on an estimated 200,000 separate radio and TV questionnaires distributed to sample homes by personal interviewers or through the mails.

Information reported—

1. Market coverage area (for each station): All counties or NCS areas where 10 percent or more of all homes listen to or view the station at least once a month.
2. Market area statistics (for each station): Total homes and total receiver homes (radio or TV) in subscriber's market coverage area; also, total homes and receiver homes for each NCS area.
3. Audience circulation (for each station): Listener or viewer homes in market coverage area and in each NCS area—
   (*a*) Separately for daytime and nighttime (where applicable); and
   (*b*) Separately for weekly and daily audiences.
4. United States radio and TV ownership:
   (*a*) By counties, States, and areas;
   (*b*) By number and type of sets owned; and
   (*c*) By room location, etc.
5. Important dimensions of listening and viewing in 1956:
   (*a*) In-home radio and TV;
   (*b*) Auto radio; and
   (*c*) Other out-of-home listening.
6. Average hours (on special request) of daily listening or viewing by homes tuning to the subscriber's station.
7. Intensified sampling (on special request) in individual counties or cities to provide detailed breakdowns of areas.

Nielsen station index

Nature of service: Ratings and additional audience listening information for radio and TV for 30 local markets. Meter-based information taken from representative samples. Reports issued from 2 to 12 times per year depending upon the market.

Information reported (for each market area)—

1. Ratings: Percent of all TV (or radio) homes in the measured area tuned to the program.
2. Sets in use: Percent of all homes tuned to all stations at a given time.
3. Audience composition: Percent of men, women, teen-agers, and children in the audience.
4. Average number of viewers per set.
5. Cumulative audience and frequency of viewing (on special request).
6. Auto plus: Giving the additional radio audience delivered by auto radios, by area, season, time of day, and day of week.

AMERICAN RESEARCH BUREAU, INC.

Metropolitan area reports

Nature of service: Over 100 markets surveyed during the year. Many of these are reported on monthly, with others reported on less frequent intervals of six, four, three, or two times yearly. Samples chosen on a random basis from telephone directory.

Information reported—

1. Ratings: Percent of all TV homes in the measured area tuned to the program.

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[1] Supplements table entitled "Television rating services: a comparative analysis of the nationally significant ratings," prepared by the Legislative Reference Service, Library of Congress, June 17, 1957.

2. Sets in use: Percent of all homes tuned to all stations at a given time.
3. Audience composition: Percent of men, women, and children under 16 in the audience (in instances where there are not enough viewing "cases" to allow proper statistical breakdown, audience composition cannot be shown).
4. Average number of viewers per set.
5. Share of sets in use (for most city reports): For each of the stations in the market by various day-part segments.
6. Cumulative ratings (published for the Monday through Friday daytime programs produced by local subscription stations): Showing how much of the total potential audience is reached at least once during the weekly campaign cycle.

Metropolitan area coverage studies

Nature of service: Measures station coverage and viewing (163 markets surveyed in February 1955, approximately 230 in February 1956, and over 150 in February 1957). Special coverage studies are made during remainder of year in response to request of clients.

Information reported—

1. Percentage of homes having TV (including UHF).
2. Percentage of homes able to receive each available station and frequency of viewing of each.
3. Stations viewed most (first and second preference) in each market, daytime and evening.

Special tabulations

Nature of service: Tabulations of audience information which are not compiled and published in the standard reports.

Information which may be requested for any combination of programs—

1. Cumulative ratings.
2. Average audience composition.
3. Frequency of viewing: Reveals the depth of duplication a particular schedule gives within a given broadcast week.
4. Individual spot or program analysis: Rating for each program and the unduplicated rating showing how many of the people watching that program did not watch any of the other programs being considered.
5. Viewing group analysis: Unduplicated rating for each program being considered and for every possible combination of the programs being considered.

Other information which may be requested—

1. Special national tabulation of ratings and homes reached based on rural (R.F.D.) families, compared to "all families."
2. Number of TV homes in Nation who can receive only one station, two stations, and so forth.
3. Percentage of total male TV viewers who watch after 11 p.m., local time.
4. Network program ratings and other audience data tabulated according to geographic regions or an advertiser's own sales divisions.

Special field surveys: Designed to isolate a particular kind of information at a specific time or place.

Trend information: Concerning the television industry generally and including rating averages and audience composition trends for different kinds and lengths of programs.

VIDEODEX, INC.

Nature of service: Regularly reported local markets, special tabulations, and special surveys.

Information reported—

Monthly—

1. Sets in use.
2. Ratings.
3. Audience share.
4. Viewers per set.

Quarterly—1. Audience composition (men, women, children between 13 and 18, and children, 12 and under).

With varying frequency—

1. Audience duplication.
2. Audience turnover.
3. Audience flow.
4. Cumulative audience.
5. Socioeconomic classification data.
6. Sponsor identification.
7. Reaction to commercial and program.
8. Incidence of products and brands in viewing homes.

THE PULSE, INC.

Nature of service: Over 150 individual markets surveyed in 1956. The number and location of these surveys was determined by the company's clients and by its own workload. The frequency of reporting from each of these markets varied from once a month to once a year. (The company's U.S. TV report is a weighted average of the individual markets surveyed in any one month with ratings weighted proportionate to the television population.) Clients may also ask for special surveys covering a wider or a smaller area than that covered by the regular survey or they may ask for surveys covering special days not surveyed in the standard survey week.

Size of sample: Varies according to markets, frequency of reporting, and nature of problems involved. A 5-day-a-week strip program would usually be rated on the basis of 500 to 1,000 homes. A once-a-week program might be rated on a sample size as low as 100 in a single station market up to a maximum of 400 in the large markets. Depending also on whether results are reported by half-hour, hourly averages, or broader periods, the total number of homes may vary from 200 to 6,000 or more in a given market.

TRENDEX, INC.

Nature of service: From the eighth to the end of each month special surveys are conducted in response to requests of clients. These surveys are normally conducted in the same 15 major cities in which the regular surveys are made. They may include special questions and varying samples designed to meet each client's unique requirements.

Source: Replies received from A. C. Nielsen Co., American Research Bureau, Inc., Videodex, Inc., the Pulse, Inc., and Trendex, Inc., in response to certain inquiries included in a letter of March 27, 1957, from Senator Warren G. Magnuson, chairman of the Senate Interstate and Foreign Commerce Committee.

Prepared by John W. Walker, Economics Division, Legislative Reference Service, the Library of Congress.

A. C. NIELSEN CO.,
Chicago, Ill., June 16, 1958.

Hon. WARREN G. MAGNUSON,
U.S. Senate, Committee on Interstate and Foreign Commerce,
Washington, D.C.

DEAR SENATOR MAGNUSON: Thank you for your letter of June 9 and the chart that you so kindly sent along. As you suggest, we will be pleased to hold this material in confidence.

With the thought that it may expedite discussions during the June 26 proceedings, I am attaching some supplementary information that is keyed to columns 1 and 2 of the chart.

I trust that it will be helpful to you and the other members of the committee to have these additional data.

Sincerely yours,

A. C. NIELSEN CO.,
HENRY RAHMEL,
Executive Vice President.

Item	Col. 1 [1]	Col. 2 [1]	Suggested updating or supplement to col. 2 [1]
3	Size of sample and viewing hours surveyed.	950 Audimeters (recorders) with each Audimeter recording 2 full weeks of viewing.	1,050 Audimeters, that meter approximately 1,110 receivers continuously throughout the year. Sample yields approximately 600,000 home quarter-hour TV measurements each week.
5	Method of contacting and recruiting sample homes.	Not available	Each home in the sample is contacted in person by full-time Nielsen employees to secure cooperation and to install Audimeter.
6	Inducement to encourage sample homes to cooperate.	do	50 cents is enclosed with film cartridge. Families select gifts from premium catalogs approximately twice annually. Nielsen pays share of receiver maintenance cost.
7	Periods covered by each survey and frequency of surveys.	2-week periods surveyed 24 times a year.	2-week periods surveyed 24 times a year. 48 weeks individually reported per year.
10	Number and type of interviewers.	Not available	NTI homes are not interviewed. The basic data are compiled automatically by Audimeters. However, Nielsen fieldmen visit each home in the sample periodically to inspect and service the equipment as necessary.
13	Monthly ratings measure.	The percentage of all TV homes able to receive the program that had it tuned in for (1) 6 minutes or more; and (2) during an average minute.	The percentage of all TV homes able to receive the program that had it tuned in for (1) 6 minutes or more; and (2) during an average minute. Nielsen ratings reports cover 2-week intervals and are supplied 24 times each year.
14	Information (in addition to ratings) reported monthly.	Sets in use: Total and average per minute. Program coverage: Number of TV homes able to receive the program in percent of total U.S. TV homes. Number of stations which transmitted the program. Total U.S. homes reached by each program (projection). Share of audience: Percentage of all viewers watching a particular program.	Sets in use: Total and average per minute. Program coverage: Number of TV homes able to receive the program in percent of total U.S. TV homes. Number of stations which transmitted the program. Total U.S. homes reached by each program (projection). Share of audience: Percentage of all viewers watching a particular program. • • • Additionally, NTI complete reports, issued 6 times per year, provide a variety of detailed information of analytic or diagnostic types.
15	Sources of revenue (from all TV rating services, both national and local).	Not available	Approximately ⅔ of revenue derived from advertiser and agency clients (see exhibit C of material forwarded April 1957); approximately ⅓ from networks, stations and other clients.

[1] Cols. 1 and 2 are transcripts of text of the chart titled "Television Rating Services: A Comparative Analysis of the Nationally Significant Ratings," dated June 17, 1957 (received by A. C. Nielsen Co., June 1958). Col. 3 up-dates or supplements col. 2.

VIDEODEX, INC.,
New York, N. Y., June 29, 1958.

Mr. NICHOLAS ZAPPLE,
Communications Counsel, U.S. Senate,
Interstate and Foreign Commerce Committee, Washington, D.C.

DEAR MR. ZAPPLE: This will acknowledge receipt of the chart to be used at the June 26 hearing on TV rating services. Thank you for sending this on to us. It's contents will be treated confidentially as requested by Senator Magnuson.

We would like to have the Videodex section of the chart amended as follows:

Category: Method of contacting and recruiting sample homes—to read: "By mail and personal interview."

(This has always been our method and is detailed as such in category: "Method of obtaining information from sample families.")

Category: Periods covered by each survey and frequency of surveys—to read: "First 7 days of every month except where major holidays fall."

(This has always been our period used and is not the same as listed in the chart due to variations between first 7 calendar days as opposed to first Sunday–Saturday week of a month.)

We hope that you will be able to schedule Videodex on the Thursday agenda, as you suggested might be possible.

Sincerely,

VIDEODEX, INC.,
ALLAN V. JAY,
Vice President-Manager.

TRENDEX, INC.,
New York, N. Y., June 12, 1958.

Mr. NICHOLAS ZAPPLE,
Communications Counsel, Senate Interstate and Foreign Commerce Committee, Washington, D.C.

DEAR MR. ZAPPLE: This will acknowledge receipt of Senator Magnuson's letter of June 9, 1958, with the attached comparative analysis of television rating services.

There are a few corrections which I would like to make at this time under the heading of "Trendex, Inc."

Item No. 2: There it states "15 cities." In February 1958, Trendex added 5 additional cities; so this should now read "20 cities."

Item No. 3: One thousand calls per half hour for all network programs for each individual evening, 6 to 11 p.m., is correct. However, as we report daytime by quarter hours, Monday through Friday, averaged, the sample here for each quarter hour is approximately 1,500 calls.

Item No. 4: Choosing of sample now reads, "new sample each month." Actually we use a random sample of telephone homes so that the sample is constantly changing

Item No. 9: Method of obtaining information from sample families. Information is obtained by the telephone coincidental method. This means that we are only interested in the television activity of the household at the time of the call. I wonder why they have underlined the word "not" when talking about tabulating the results as those people who are not at home and awake and, therefore, could not possibly be watching television are certainly just as important as those who are.

Item No. 13: Information (in addition to ratings) reported monthly. Trendex now publishes a bimonthly report called the "Television Advertiser's Report." This report shows—

1. An index of audience composition.
2. An index of program selectivity (that is, who in the family chose the particular program being viewed).
3. A breakdown of the ages of the men, women, and children viewing network television.
4. An index of sponsor identification.

I believe that these are the only changes made in our service.

Cordially,

EDWARD G. HYNES, Jr.,
President, Trendex, Inc.

FEDERAL TRADE COMMISSION,
Washington, June 20, 1958.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Interstate and Foreign Commerce,
United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: This is in further reference to your letter of June 11, 1958.

A file search made just prior to the time I mailed my letter to you dated June 21, 1957, disclosed no complaints involving program rating services. However, since receipt of your letter dated June 11, 1958, a more exhaustive search has been made of our records, which disclosed three files involving complaints

relative to such rating organizations. Both of those matters were filed after some preliminary consideration for the reason they did not present a substantial basis for investigation.

The investigation mentioned in my letter dated June 21, 1957, which involved alleged misrepresentations by a radio station of its geographic and audience coverage, was closed for the reason that the station voluntarily discontinued use of the questioned claims.

Stipulations of discontinuance have been accepted from several radio stations which were misrepresenting their geographic coverage. Copies of some of these stipulations are enclosed.

As was pointed out in my previous letter, a question exists as to whether this service phase of the operations of service rating concerns are subject to the Commission's jurisdiction under the Federal Trade Commission Act. Aside from the jurisdictional question, it appears that investigative problems of the first magnitude are presented in endeavoring to determine the approximate number of persons in a geographic area that have listened to a particular radio or television station at any given time. In any proceeding involving claims based on the accuracy of such an audience coverage report, the Commission's staff must bear the burden of proof in demonstrating the deceptive character of those claims. This might require the conducting of a survey of such magnitude that it could not be undertaken without seriously affecting the Commission's discharge of its responsibilities in areas of established jurisdiction.

The Commission does not currently have any specific investigative program covering alleged misrepresentations of audience coverage by radio or television stations or rating service organizations.

With best wishes, I am

Sincerely yours,

JOHN W. GWYNNE, *Chairman.*

Enclosures.

[Federal Trade Commission Decisions]

* * * * * * *

3191. *Radio Communications—Qualities, Properties, or Results.*—The Sunshine Broadcasting Co., a corporation, engaged in interstate commerce in communication by radio and dissemination of such communications including commercial and other programs by and through its broadcasting station designated by the call letters "KTSA" to persons located within the State of Texas and other States of the United States, in competition with other corporations, individuals, and partnerships likewise engaged, entered into the following agreement to cease and desist from the alleged unfair methods of competition in commerce as set forth therein.

The Sunshine Broadcasting Co., in connection with the dissemination of such communications in commerce, as defined by said act, agreed to cease and desist from using the slogan or words "KTSA San Antonio, Texas, 5,000 WATTS, DOING A 50,000 WATT JOB" (Aug. 4, 1941).

* * * * * * *

03086. *Radio Broadcasting Facilities—Unique, and Qualities, Properties, or Results.*—Scranton Broadcasters, Inc., a corporation operating Radio Station WGBI, 1000 Wyoming Avenue, Scranton, Pa., vendor-advertiser, was engaged in selling the use of its radio-transmittal facilities and power and agreed, in connection with the dissemination of future advertising, to cease and desist from representing directly or by implication:

(*a*) That Radio Station WGBI is the only radio station heard in the Scranton-Wilkes-Barre market area.

(*b*) That outside radio stations are not heard in the Scranton-Wilkes-Barre market area.

(*c*) That Radio Station WGBI is the only regional or clear channel station serving the Scranton-Wilkes-Barre market area.

(*d*) That Radio Station WGBI covers the entire territory of northeastern Pennsylvania.

(*e*) That a survey shows that 98 percent of the daytime listeners or 96 percent of the nighttime listeners in Scranton's home county of Lackawanna regularly listen to Radio Station WGBI, or from misrepresenting in any manner the station's audience or coverage as shown by surveys or otherwise.

Scranton Broadcasters, Inc., further agreed to cease and desist from misrepresenting through exaggeration the number of prospective purchasers who listen to Radio Station WGBI, or the territory which it covers (Dec. 17, 1942).

* * * * * * *

03047. *Radio Transmittal Facilities and Power—Success, Use or Standing, and Qualities, Properties, or Results.*—Liberty Broadcasting Corp., a corporation operating Radio Station WAGA, 56 Marietta Street NW., Atlanta, Ga., vendor-advertiser, was engaged in selling the use of its radio transmittal facilities and power and agreed, in connection with the dissemination of future advertising, to cease and desist from representing directly or by implication:

(*a*) That Radio Station WAGA has more listeners in Atlanta than any other radio station.

(*b*) That Radio Station WAGA can, when operating as authorized in its construction permit, be heard without interference over the entire State of Georgia.

Liberty Broadcasting Corp. further agreed to cease and desist from misrepresenting through exaggeration the number of prospective purchasers who listen to Radio Station WAGA (Aug. 21, 1942).

* * * * * * *

02392. *Radio Station Services—Power.*—Intermountain Broadcasting Corp., a corporation, Tribune-Telegram Building, Salt Lake City, Utah, operating a radio station designated KDYL, was engaged in selling the facilities, power, and energy of its station and agreed, in connection with the dissemination of future advertising to cease and desist from representing, directly or by implication, that the power of said station is 5,000 watts unless and until such power is actually authorized for use and used by the said radio station during its entire broadcasting period, or unless it is clearly explained in direct connection with such representation that such power is authorized and used only during certain specified hours (June 26, 1939).

02393. *Radio Station Services—Power.*—Lamar Life Insurance Co., a corporation, Lamar Life Building, Jackson, Miss., operating a radio station designated WJDX, was engaged in selling the facilities, power, and energy of its station and agreed, in connection with the dissemination of future advertising to cease and desist from representing in published advertisement or otherwise, that the power of said station is 5,000 watts unless and until such power is actually authorized for use and used by the said radio station during its entire broadcasting period, or unless it is clearly explained in direct connecton with such representation that such power is authorized and used only during certain specified hours (June 26, 1939).

02394. *Radio Station Services—Power.*—Mosby's, Inc., a corporation, Missoula, Mont., operating a radio station designated KGVO, was engaged in selling the facilities, power, and energy of its station and agreed, in connection with the dissemination of future advertising to cease and desist from representing directly or by implication that the power of said station is 5,000 watts, unless and until such power is actually authorized for use and used by the said radio station during its entire broadcasting period, or unless it is clearly explained in direct connection with such representation that such power is authorized and used only during certain specified hours (June 26, 1939).

02395. *Radio Station Services—Power.*—Woodmen of the World Life Insurance Society, a corporation, Omaha, Nebr., operating a radio station designated WOW, was engaged in selling the facilities, power, and energy of its station and agreed, in connection with the dissemination of future advertising to cease and desist from representing in published advertisements or otherwise, that the power of said station is 5,000 watts unless and until such power is actually authorized for use and used by the said radio station during its entire broadcasting period, or unless it is clearly explained in direct connection with such representation that such power is authorized and used only during certain specified hours (June 26, 1939).

* * * * * * *

02975. Radio Broadcasting—Qualities, Properties, or Results.—Southern Broadcasting Stations, Inc., a corporation operating Radio Station WGST, Forsyth Building, Atlanta, Ga., vendor-advertiser, was engaged in selling to vendors

of various commodities for advertising purposes the facilities, radio power, and energy of Radio Station WGST and agreed, in connection with the dissemination of future advertising, to cease and desist from representing directly or by implication, that the power of said station is 5,000 watts unless and until such power is actually authorized for use and used by said radio station during its entire broadcasting period, or unless it is clearly explained in direct connection with such representation that such power is authorized and used only during certain specified hours, and further that its radio station WGST has more listeners than any other radio station in Atlanta unless and until such be the fact (Apr. 27, 1942).

UNITED STATES OF AMERICA, BEFORE FEDERAL TRADE COMMISSION

File No. 5723476

IN THE MATTER OF SPRINGFIELD BROADCASTING COMPANY, INC., A CORPORATION, SPRINGFIELD, MISSOURI

STIPULATION AS TO THE FACTS AND AGREEMENT TO CEASE AND DESIST

Pursuant to the provisions of the Federal Trade Commission Act (38 Stat. 717; as amended 52 Stat. 111; 15 U.S.C.A., Sec. 41), the Federal Trade Commission caused an investigation to be made of the acts and practices used by Springfield Broadcasting Company, Inc. in commerce as defined by the Act, and based on such investigation believes that the said corporation has been or is using in commerce certain acts and practices which are violative of the provisions of said Act.

It now appearing that Springfield Broadcasting Company, Inc. is willing to stipulate as to the facts and enter into an agreement to cease and desist from the use of the acts and practices as hereinafter set forth in such agreement, and that the Federal Trade Commission may be willing to accept such stipulation and agreement to cease and desist without prejudice to its right to issue a complaint and institute formal proceedings against Springfield Broadcasting Company, Inc. if at any time the Commission shall deem that such action is warranted;

IT IS HEREBY STIPULATED by and between the Federal Trade Commission and Springfield Broadcasting Company, Inc. that the following is a true statement of the facts:

Springfield Broadcasting Company, Inc. is a corporation organized and existing under the laws of the State of Missouri with its principal place of business located in the City of Springfield, the State of Missouri. It is now and has been for more than one year last past engaged in offering for sale and selling in commerce as defined by said Act radio broadcasting facilities.

In the course and conduct of its business, Springfield Broadcasting Company, Inc., has made, published, and caused to be published, certain advertising matter, including the following statements, claims, and representations, for the purpose of inducing and which is likely to induce to purchase of said commodity:

"Since KGBX came to Springfield as this city's First Radio Station * * *."
"* * * our 30 years of service."

By publication of the aforesaid advertising matter, statements, claims, and representations, Springfield Broadcasting Company, Inc., has directly and implied represented that Radio Station KGBX was the first radio station licensed to operate in Springfield, Missouri, and has operated there for 30 years, when, as a matter of fact, other radio stations were licensed to operate before KGBX began operating in Springfield and it has not been operating there for 30 years.

IT IS HEREBY AGREED by Springfield Broadcasting Company, Inc., that in connection with the offering for sale and sale of radio broadcasting facilities, in commerce as defined by the said Act, it will forthwith cease and desist from representing, directly, or by implication;

(1) That Radio Station KGBX was the first radio station to operate in Springfield, Missouri, or otherwise representing the relative position of that station with other radio stations not in accordance with the facts;

(2) That Radio Station KGBX has served Springfield, Missouri, for any period in excess of the time it has actually been operating in that city.

This stipulation is entered into pursuant and subject to Sections 1.54 and 1.55 of the Rules of Practice of the Federal Trade Commission. It does not constitute an admission by Springfield Broadcasting Company, Inc., that it has engaged in any method, act, or practice violative of law.

Witness the following signatures this 18th day of June 1957.

FEDERAL TRADE COMMISSION,
By ROBERT T. SECREST, *Acting Chairman.*

Approved July 18, 1957.

FEDERAL TRADE COMMISSION,
By ROBERT M. PARRISH, *Secretary.*
SPRINGFIELD BROADCASTING COMPANY, INC.,
By KEITH G. WINS,
Vice President and General Manager.
By WALTER A. WEBER, *President.*

Stipulation No. 8918.

FEDERAL TRADE COMMISSION,
Washington June 21, 1957.

HON. WARREN G. MAGNUSON,
Chairman, Committee on Interstate and Foreign Commerce,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reference to your letters of May 22 and June 4, 1957, transmitting information concerning the operations of radio and television program rating services and inquiring whether the Commission has established any procedure for following and weighing such services.

An examination of our records discloses that to date the Commission has received no complaints or other information charging or indicating that concerns so engaged may be employing unfair or deceptive practices in connection with the promotion and sale of such measurement services. Accordingly, no procedures have been established for analyzing or evaluating such services.

The Federal Trade Commission Act declares illegal "unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce." This act requires, first, that the methods or practices in question be in commerce and, second, that such commerce be interstate in character.

From information available concerning the operations of such concerns, it is apparent that they are engaged in rendering advice to their clients, particularly concerning the calculated number of persons listening to or viewing the programs of different stations. Such an activity takes on the aspect of a service of a professional character. Without excluding the Federal Trade Commission from taking jurisdiction over certain types of business activities in the nature of services, there is serious doubt that the law can be made applicable to the supplying of this data by the rating services to their clients.

Related to the problem is a matter which the Commission now has under consideration involving the use by a radio station of a report which is alleged to misrepresent the extent of the station's audience coverage. Quite clearly the reliability of claims for coverage or listening audience becomes a material issue in this type of case from whatever source secured.

Your interest in bringing this matter to the attention of the Commission is appreciated.

Sincerely yours,

JOHN W. GWYNNE, *Chairman.*

TPI RATINGS, INC.,
New York, N.Y., June 13, 1958.

Senator WARREN G. MAGNUSON,
Senate Office Building, Washington, D.C.

DEAR SENATOR MAGNUSON: I understand that your committee will discuss the subject of television ratings starting Thursday, June 26.

I think you will be interested in the attached report which shows the highlights of a test conducted by me in Syracuse, N.Y.

This test is based on personal coincidental interviews conducted with people in the room in which the television set is located. It is an idea devised by George Abrams, chairman of the Radio and TV Committee of the ANA, and vice president, advertising of Revlon, Inc., and myself.

Copies of the report are being forwarded by Mr. Joseph Allen, vice president of the Association of National Advertisers, to each of the 800 members of the ANA. Copies have also been sent to each of the television networks, and to the Advertising Research Foundation.

I would greatly appreciate any comments you might have concerning this study.

Thank you.

Sincerely yours,

MILES A. WALLACH, *President.*

A STUDY OF TV VIEWING IN SYRACUSE, N.Y., COVERING SUNDAY, MARCH 9, TUESDAY, MARCH 11, THURSDAY, MARCH 13, 1958—A SPECIAL REPORT FROM THE RADIO-TELEVISION COMMITTEE

By approval of both the ANA board of directors and subsequently the radio-TV TV committee of ANA, authority has been granted for the following special report on a new type of rating service to be disseminated to the membership of the Association of National Advertisers.

JOSEPH ALLEN, *Vice President.*

MAY 26, 1958.

From the chairman of the radio-TV committee

In recent years, the greatest single problem to come before your committee on a consistent basis has been the question of radio and television ratings. Member companies, alarmed at the multi-million-dollar decisions being made on program ratings in which they had shaky confidence, have led to a search for a better and more valid method of determining the audience reached by such programs, the listening or viewing habits of the American consumer, and the qualitative composition of this audience. In addition, many advertisers were concerned with determining whether the large audiences they were reaching were aware of the advertisers bringing them these programs and could properly identify the sponsor.

Over these years, four major techniques have served to bring advertisers the so-called ratings of the programs they sponsor. These have been the mechanical Audimeter, which recorded dial changes by minutes; the telephone interview, either on a delayed or coincidental basis; the diary method, in which a written record was maintained of programs and their audience; and the personal interview, accomplished on the day after the broadcast.

The method of personal coincidental interviewing—actually going into the home and interviewing the consumer while programs are on the air—has not been used to determine ratings, primarily because it appeared too expensive an operation for advertisers to support.

About 1 year ago, a research organization conducted a study of dining habits of 7,000 American families. In this research, the interviewer actually stood by during lunch and dinner hours recording the contents of the meals being consumed—in effect, doing a personal coincidental study of eating.

As chairman of the radio-TV committee, I was naturally interested in the possible application of this method to a study of television viewing habits. Could an interviewer gain access to homes at all hours and report on the qualitative aspects of television viewing? If this could be accomplished, the following advantages over existing methods was immediately apparent:

Personal coincidental versus Audimeter: The Audimeter measured dial changes minute by minute. It therefore reported receiver-in-use information, whereas personal coincidental actually reported whether the members of a family were viewing a program. The Audimeter, by its mechanical nature, could not provide qualitative data on the viewer of a program of that viewer's identification of the sponsor.

Personal coincidental versus diary: The diary method could provide all of the resired qualitative data outline above, but required constant reporting throughout the day and night of the reporter's viewing habits as well as other members of the family. The diary method therefore depends upon memory and recollection as contrasted with the on-the-spot reporting by the personal coincidental method.

Personal coincidental versus personal interview (second day): While there is no basic difference in type of interview, the latter method has two basic

flaws—it relies on recollection the next day and the interviewer uses a program listing guide to suggest programs the viewer might have seen. Personal coincidental, on the other hand, reports what they are actually viewing.

Personal coincidental versus telephone coincidental: The interview, by this method is conducted by telephone while programs are on the air. The same questionnaire used in the home can be employed. The only question, therefore, is whether the answers given by telephone are as valid as answers given in the home, where the interviewer can actually check the television receiver to see whether the program reported is being viewed and who is viewing it.

A TEST OF PERSONAL COINCIDENTAL VERSUS TELEPHONE COINCIDENTAL

This perplexing problem of the reliability of replies given by the telephone coincidental method led to what has been called the Syracuse test, probably the most exacting comparative examination ever made of the personal interview technique versus the telephone interview technique.

In the city of Syracuse during the week of March 9, 1958, a matched sample of 5,000 telephone homes and 5,000 personal interview homes were called upon using an identical questionnaire. The interviewing was conducted and supervised by the M. A. Wallach Research Co. using a team of more than 50 interviewers.

These interviewers, often working under the most negative weather conditions (a 16-inch blizzard), determined viewing habits, audience composition, sponsor identification, and secured qualitative data on viewers at varying hours of the day and night. Interviews were made during mealtime preparation periods, during dining hours, as early as 10 a.m. in the morning, as late as 11 p.m. at night, and on Sundays (both afternoon and evening).

(In addition, the city of Syracuse is measured by ARB (American Research Bureau) once or twice a year. There are 249 diaries used in television homes and ARB had measured viewing habits and audience composition in Syracuse during the first week in February 1958. Inasmuch as virtually all programs remained intact over the two viewing periods (February and March) and studies showed little significant difference in sets-in-use figures for these periods, the "Wallach Report" shows the relative data for Syracuse by the diary method as contrasted with personal coincidental interviewing.)

In the city of Syracuse, the A. C. Nielsen Co. is reported to have one or two audimeters in operation. Since these audimeters did not provide comparative qualitative viewing data, no attempt is made to contrast their findings with those obtained in the Syracuse test of personal versus telephone coincidental interviewing.

WHAT THE STUDY SHOWS

As you reach the attached report, you will soon discover that there is little agreement between rating and viewing data secured by telephone coincidental and personal coincidental. Each method apparently produces different results, although as might be expected, there are periods when replies come "coincidentally" close under the two techniques.

It is the areas of "sponsor identification," not "viewing of program," "misidentification of channel," and "composition of audience viewing" where telephone coincidental departs furthest from the results secured by coincidental in-home interviewing.

In a comparison with the diary method, it is in the area of "sets in use" where the results shown vary most widely from those obtained by the personal coincidental method. During certain morning periods, there appears to be an understatement of sets in use; during evening hours, an overinflation of sets in use. Against both the telephone coincidental and personal coincidental method, the diary generally reports more viewers per set than either method.

WHAT A PERSONAL COINCIDENTAL RATING SERVICE WOULD COST THE INDUSTRY

Approximately 100,000 interviews would be conducted nationally once a month during a "secret" rating week, using the personal coincidental method. During the fall season when many new programs are being introduced, additional reports would be prepared.

Rating reports, complete with such qualitative data as sponsor identification, age, income, sex, and such quantitative data as sets in use, share of audience, and viewers per set would be disseminated about 11 days after the rating period.

The cost of such a national television rating service annually would amount to about $5 million. This cost would, of course, be shared in relative amounts by the networks, advertising agencies, and the sponsors of programs.

Many times this sum is currently being expended by these same groups for a variety of rating services, none of which agrees with the other in the end "rating" given to programs. Against the annual expenditure for television of more than $1 billion, the sum of $5 million would seem to be a reasonable investment to secure data influencing decisions involving millions of dollars per program.

If sufficient advertiser support of the personal coincidental method is indicated by advertisers, their agencies, and the networks, it is hoped a plan of financial support can be evolved which will permit this system to be placed in operation as promptly as possible.

There have already been encouraging comments from major advertisers and the networks.

If you have any questions concerning the proposed coincidental method, I shall be glad to answer them for you.

Respectfully submitted.

GEORGE J. ABRAMS,
Vice President, Revlon, Inc., Chairman, Radio-TV Committee.

SCOOP AND METHOD OF SYRACUSE TEST

Syracuse was selected as the test market for TPI because it is a self-sustaining market, is close to New York so as to permit close supervision, and is a two-channel city, which is the average number of channels for a given city.

A probability sample of the city of Syracuse and the entire county of Onondaga was drawn during February of this year. The sample was composed of 10,200 homes in the entire county, or approximately 10 percent of all TV homes. Using a matched probability sample with U.S. Census data projected to 1957, the overall sample was divided equally so that 50 percent of all interviews were on a personal coincidental basis and 50 percent on a telephone coincidental basis.

Three different checking periods were decided upon. Sunday, March 9, between 4 p.m. and 11 p.m., was used in order to determine whether or not it was feasible to conduct personal interviews during the peak viewing hours and late evening hours; Tuesday, March 11, was selected during the hours of 6 p.m. and 8:30 p.m. These hours were chosen in order to see whether personal interviews could be conducted during dinner hours. The third interviewing period was Thursday, March 13, between the hours of 10 a.m. to 6 p.m. This period was chosen in order to see what would happen while the woman of the house was doing her daily household chores, fixing lunch for the children, when the children came home from school, etc.

In order to make some comparison with existing services, we took the February "Syracuse ARB Report"; there being only minor variations between February and March TV viewing. (Syracuse was not measured by ARB during March.)

In over 90 percent of all personal interviews, the interviewer went into the room where the TV set was located. The refusal rate before 10 p.m. was 1 percent by telephone—1 percent by personal interview; between 10 p.m. and 10:30 p.m. 4 percent by personal interview—4 percent by telephone; between 10:30 p.m. to 11 p.m. 7 percent by personal interview—7 percent by telephone.

The following tables are intended to show some of the highlights of the Syracuse findings. This is in no way a complete report. The full findings will be made available shortly and will contain the following data: Age and sex of viewer, income status of families interviewed, multiple set viewing, sponsor identification, channel identification, members of family home but not viewing, members of family away from home.

Program ratings

SUNDAY, MAR. 9

Time	Program	Station	Rating		
			Personal coincidental	Telephone coincidental	Diary, February
4 to 4:30 p.m.	Omnibus	WSYR	18.5	17.1	30.9
	Movie and Face the Nation	WHEN	8.9	11.8	9.6
		Other			0.4
	Don't know channel		1.4	7.9	
	Sets in use		28.8	36.8	40.9
4:30 to 5 p.m.	Omnibus	WSYR	23.0	23.1	27.3
	Face the Nation	WHEN	6.6	5.4	14.1
		Other		0.7	0.4
	Don't know channel		3.3	6.1	
	Sets in use		32.9	35.3	41.8
8 to 8:30 p.m.	Steve Allen	WSYR	23.1	18.3	39.4
	Ed Sullivan	WHEN	20.5	26.0	40.6
		Other			0.4
	Don't know channel		8.9	10.7	
	Sets in use		52.6	55.0	80.4
8:30 to 9 p.m.	Steve Allen	WSYR	24.1	26.9	38.6
	Ed Sullivan	WHEN	24.1	24.4	39.8
		Other			0.4
	Don't know channel		6.6	11.9	
	Sets in use		54.8	63.1	78.8
9 to 9:30 p.m.	Dinah Shore	WSYR	17.5	17.4	34.5
	GE Theater	WHEN	25.5	28.6	37.3
		Other			0.4
	Don't know channel		4.4	12.4	
	Sets in use		47.4	58.4	72.7
9:30 to 10 p.m.	Dinah Shore	WSYR	14.2	15.3	32.5
	Alfred Hitchcock Presents	WHEN	24.8	25.9	39.8
	Don't know channel		3.6	10.6	
	Sets in use		42.6	51.8	72.3
10 to 10:30 p.m.	Loretta Young	WSYR	24.8	21.9	47.0
	$64,000 Challenge	WHEN	15.3	14.8	19.7
		Other	1.5		0.4
	Don't know channel		2.9	11.8	
	Sets in use		44.5	48.5	67.1

TUESDAY, MARCH 11

6 to 6:30 p.m.	Sky King	WSYR	22.4	24.7	26.9
	Early Show	WHEN	10.9	10.3	14.9
	Don't know channel		2.8	2.4	
	Sets in use		36.1	37.4	41.8
6:30 to 7 p.m.	News	WSYR	22.9	24.0	22.9
	News	WHEN	15.3	11.7	18.1
		Other		0.6	0.4
	Don't know channel		4.2	1.7	
	Sets in use		42.4	38.0	41.4
7 to 7:30 p.m.	Mama	WSYR	17.7	13.1	19.3
	Broken Arrow	WHEN	20.6	19.1	30.5
		Other			1.2
	Don't know channel		2.8	4.4	
	Sets in use		41.1	36.6	51.0
7:30 to 8 p.m.	"M" Squad	WSYR	15.3	16.8	23.7
	Name That Tune	WHEN	24.3	21.0	36.1
		Other			0.4
	Don't know channel		4.2	12.5	
	Sets in use		43.8	50.3	60.2
8 to 8:30 p.m.	George Gobel	WSYR	30.0	22.8	37.8
	Mr. Adams and Eve	WHEN	11.9	14.6	25.7
		Other			0.4
	Don't know channel		8.1	12.9	
	Sets in use		50.0	50.3	63.9

Sets in use Sunday, Mar. 9, 4 p.m. to 10:30 p.m.

	4 to 4:30	4:30 to 5	8 to 8:30	8:30 to 9	9 to 9:30	9:30 to 10	10 to 10:30
Personal interview	28.8	32.9	52.6	54.8	47.4	42.6	44.5
Telephone interview	36.8	35.3	55.0	63.1	58.4	51.8	48.5
Diary (February)	40.9	41.8	80.4	78.8	72.2	72.3	67.1

Differences in reporting sets in use are even more pronounced during evening hours. There is a great degree of inflation in both telephone and diary techniques. The degree of difference between personal interview and diary is, in many cases, as great as 50 percent.

Your attention is called to the diary report for the 8 to 9 p.m. period which shows almost double the number of sets in use as against the 4 to 5 p.m. period—whereas both personal coincidental and telephone coincidental indicate slightly over a 50 percent increase in sets in use for the same viewing periods.

Sets in use Thursday, Mar. 13, 10 a.m. to 6 p.m.

	10 to 10:30	10:30 to 11	12 to 12:30	4 to 4:30	4:30 to 5	5:30 to 6
Personal interview	15.1	14.0	17.3	26.7	24.7	41.2
Telephone interview	10.6	12.7	24.9	20.6	24.1	27.1
ARB (February)	10.8	17.0	16.0	22.1	22.1	43.7

Differences in reporting whether a TV set is in use when personally checked in homes and when checked via telephone reveal startling differences ranging from as little as 2 percent to as much as 33 percent. An indication once more that the telephone method of determining whether a set is in use can be far off particularly in the dinner hour period from 5:30 to 6 p.m. or in the housecleaning period from 10 to 11 a.m.

NOTE.—We find extraordinary differences in reported sets in use by the telephone method and both personal coincidental and diary method for the period from 10:30 a.m. to 12:30 p.m. The only rationalization possible is that the housewife, busy with her morning chores, prefers to end the phone interview by reporting that the TV receiver is not in use.

Audience composition Sunday, Mar. 9, 4 to 10:30 p.m.—Average number of people viewing per home (by channel)

	4 to 4:30	4:30 to 5	8 to 8:30	8:30 to 9	9 to 9:30	9:30 to 10	10 to 10:30
Channel 3:							
Personal interview	2.7	2.8	2.5	2.4	2.0	1.6	2.1
Telephone interview	2.4	2.1	2.6	2.6	1.9	2.4	1.9
Diary (February)	2.4	2.3	2.9	2.8	2.6	2.6	2.3
Channel 8:							
Personal interview	2.2	1.0	2.3	2.3	2.3	2.4	2.0
Telephone interview	2.8	1.5	2.2	2.4	2.0	2.2	1.6
Diary (February)	2.9	2.4	2.6	2.6	2.4	2.4	2.1

Differences in viewers per set are marked, particularly when comparing personal interview against diary, which relies primarily on the memory of a single respondent.

Audience composition Thursday, Mar. 13, daytime viewing, 10 a.m. to 6 p.m.—average number of people viewing per home (by channel)

	10 to 10:30	10:30 to 11	12 to 12:30	4 to 4:30	4:30 to 5	5:30 to 6
Channel 3:						
Personal interview	2.0	1.8	1.8	1.5	1.8	2.3
Telephone interview	1.6	2.0	2.0	1.1	1.6	2.4
Diary (February)	(1)	(1)	(1)	(1)	(1)	2.4
Channel 8:						
Personal interview	1.5	1.2	2.0	2.1	2.0	2.0
Telephone interview	2.0	1.1	1.5	1.5	1.6	1.7
Diary (February)	(1)	(1)	(1)	(1)	(1)	(1)

[1] The diary report for February does not show audience composition for any period prior to 5:30 p.m.

Audience composition (men, women, and children as percent of total audience)

SUNDAY, MAR. 9

Time	Program	Station		Rating	Men	Women	Children	Viewers per set
					Percent	*Percent*	*Percent*	
4 to 4:30 p.m.	Omnibus	WSYR	Personal coincidental	18.5	37	32	31	2.7
			Telephone coincidental	17.1	26	26	48	2.4
			Diary (February)	30.9	36	45	19	2.4
	Movie and Face the Nation	WHEN	Personal coincidental	8.9	38	24	38	2.2
			Telephone coincidental	11.8	28	20	52	2.8
			Diary (February)	9.6	34	50	16	2.9
4:30 to 5 p.m.	Omnibus	WSYR	Personal coincidental	23.0	22	36	42	2.8
			Telephone coincidental	23.1	36	38	26	2.1
			Diary (February)	27.3	34	48	18	2.3
	Face the Nation	WHEN	Personal coincidental	6.6	44	44	11	1.0
			Telephone coincidental	5.4	50	25	25	1.5
			Diary (February)	14.1	35	46	19	2.4
8 to 8:30 p.m.	Steve Allen	WSYR	Personal coincidental	23.1	33	43	24	2.5
			Telephone coincidental	18.3	32	37	31	2.6
			Diary (February)	39.4	33	40	27	2.9
	Ed Sullivan	WHEN	Personal coincidental	20.5	39	36	25	2.3
			Telephone coincidental	26.0	33	44	23	2.2
			Diary (February)	40.6	35	50	15	2.6
8:30 to 9 p.m.	Steve Allen	WSYR	Personal coincidental	24.1	36	36	28	2.4
			Telephone coincidental	26.9	34	37	29	2.6
			Diary (February)	38.6	35	41	24	2.8
	Ed Sullivan	WHEN	Personal coincidental	24.1	39	48	13	2.3
			Telephone coincidental	24.4	40	40	21	2.4
			Diary (February)	39.8	35	50	15	2.6
9 to 9:30 p.m.	Dinah Shore	WSYR	Personal coincidental	17.5	33	57	10	2.0
			Telephone coincidental	17.4	42	55	43	1.9
			Diary (February)	34.5	37	49	14	2.6
	GE Theater	WHEN	Personal coincidental	25.5	43	41	16	2.3
			Telephone coincidental	28.6	40	44	16	2.0
			Diary (February)	37.3	34	51	15	2.4
9:30 to 10 p.m.	Dinah Shore	WSYR	Personal coincidental	14.2	44	53	3	1.6
			Telephone coincidental	15.3	38	51	11	2.4
			Diary (February)	32.5	37	49	14	2.6
	Alfred Hitchcock Presents	WHEN	Personal coincidental	24.8	37	49	15	2.4
			Telephone coincidental	25.9	41	41	17	2.2
			Diary (February)	39.8	34	53	13	2.4
10 to 10:30 p.m.	Loretta Young	WSYR	Personal coincidental	24.8	36	47	17	2.1
			Telephone coincidental	21.9	43	53	4	1.9
			Diary (February)	47.0	34	51	15	2.3
	$64,000 Challenge	WHEN	Personal coincidental	15.3	46	46	7	2.0
			Telephone coincidental	14.8	42	58	----	1.6
			Diary (February)	19.7	40	58	2	2.1

Audience composition (men, women, and children as percent of total audience)—Continued

THURSDAY, MAR. 13

Time	Program	Station		Rating	Men	Women	Children	Viewers per set
					Percent	*Percent*	*Percent*	
10 to 10:30 a.m.	Dough Re Mi	WSYR	Personal coincidental	5.4	17	44	39	2.0
			Telephone coincidental	4.3	29	43	28	1.6
	Garry Moore	WHEN	Personal coincidental	9.0	5	27	68	1.5
			Telephone coincidental	3.9	0	25	75	2.0
10:30 to 11 a.m.	Treasure Hunt	WSYR	Personal coincidental	6.7	0	48	52	1.8
			Telephone coincidental	4.6	16	32	52	2.0
	Arthur Godfrey	WHEN	Personal coincidental	6.7	0	60	40	1.2
			Telephone coincidental	6.1	21	58	21	1.1
12 noon to 12:30 p.m.	Tic Tac Dough	WSYR	Personal coincidental	11.2	9	36	55	1.8
			Telephone coincidental	10.9	26	44	30	2.0
	Hotel Cosmopolitan	WHEN	Personal coincidental	5.6	17	44	39	2.0
			Telephone coincidental	10.9	12	59	29	1.5
4 to 4:30 p.m.	Queen for A Day	WSYR	Personal coincidental	18.2	14	43	43	1.5
			Telephone coincidental	8.5	13	60	27	1.1
	Brighter Day	WHEN	Personal coincidental	6.3	18	41	41	2.1
			Telephone coincidental	8.5	21	50	29	1.5
4:30 to 5 p.m.	Queen for A Day	WSYR	Personal coincidental	16.3	18	39	43	1.8
			Telephone coincidental	13.3	17	54	29	1.6
	Edge of Night	WHEN	Personal coincidental	7.2	9	48	43	2.0
			Telephone coincidental	6.7	14	38	48	1.6
5:30 to 6 p.m.	Mickey Mouse	WSYR	Personal coincidental	30.9	13	12	75	2.3
			Telephone coincidental	18.1	5	11	84	2.4
			Diary (February)	35.3	8	15	77	2.4
	Early Show	WHEN	Personal coincidental	6.7	17	44	39	2.0
			Telephone coincidental	5.3	12	29	59	1.7
			Diary (February)	7.6				

NOTE.—The diary method does not show audience composition for daytime periods; it only shows WSYR for the 5:30 to 6 p.m. period.

AUDIENCE COMPOSITION

Example

When a telephone interviewer seeks to determine the number of viewers watching a program, the subject on the phone must report from recollection. The personal interviewer actually sees the number of viewers watching a program and secures their age, sex, and sponsor identification information. Notice how differently telephone viewers report on persons not watching a program as against personally interviewed viewers.

At home, but not watching, Sunday, Mar. 9

	Number of interviews	4:30 to 5 p.m.			
		Men	Women	Children	Total
Personal interview	152	70	65	70	205
Telephone interview	147	43	58	41	142

In other words, persons reporting by telephone reported 30 percent less persons not viewing than was actually found in a check of an equal number of homes in the same time period.

Not viewing factor, Tuesday, Mar. 11, 6 to 8:30 p.m.

	6 to 6:30	6:30 to 7	7 to 7:30	7:30 to 8	8 to 8:30
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Personal interview	40.8	31.9	34.1	19.4	17.5
Telephone interview	36.7	30.7	30.6	20.4	25.7

Comment: Telephone technique does not accurately tell us whether people are viewing or not viewing. In effect, it appears to depend on the telephone subjects desire to terminate a phone interview by replying "I'm not watching television." Consequently, a sets-in-use figure arrived at by telephone is subject to considerable error as shown above. It can be as much as 50 percent off (see Tuesday 8 to 8:30 p.m.) or as little as 4 percent off (see Tuesday 6:30 to 7 p.m.).

4376

TELEVISION INQUIRY

TPI RATINGS, INC. 424 MADISON AVE. NEW YORK, N.Y.

PERSONAL INTERVIEW

Tract #_____ Block #_____ Address_____

Not at home ( ) Refused ( )

1. Exact time interview begins _____ p.m. a.m. (CIRCLE ONE)

2. How many television sets do you have? _____ (IF "No set"): SKIP TO Q.11

3a. Is (one of) your television set(s) on now? Yes ( ) No ( ) (IF "No"):SKIP TO Q.9

b. (IF MORE THAN ONE SET): Is your other set on now? Yes ( ) No ( )

(FINISH SET #1 BEFORE ASKING ABOUT SET #2)

		SET #1	SET #2
4.	To which channel is this set tuned?	_____	_____
5.	What program is on now?	_____	_____
6.	What was advertised on this show?	_____	_____
		_____	_____
		_____	_____
7.	What is the age and sex of each family member now watching this show?	M___ ___ ___ ___ ___ F___ ___ ___ ___ ___	M___ ___ ___ ___ ___ F___ ___ ___ ___ ___
8.	Set checked by interviewer	Yes ( ) No ( )	Yes ( ) No ( )
9.	Was this set tuned into a program at any time from___to___(previous ½ hour)?	Yes ( ) No ( )	Yes ( ) No ( )
10a.	(IF "Yes"): To which channel?	_____	_____
	b. What program was on?	_____	_____
	c. What was advertised on this show	_____	_____
		_____	_____
		_____	_____

11. What is the age and sex of each family member now at home and not watching television?

M___ ___ ___ ___ ___
F___ ___ ___ ___ ___

12. What is the age and sex of each family member now away from home ?

M___ ___ ___ ___ ___
F___ ___ ___ ___ ___

13. Income: Under $3,000 ( ) $3,000-$4,999 ( ) $5,000-$7,499 ( ) Over $7,500 ( )

Interviewer_____ Date_____

14. Exact time interview ends___ ___p.m. a.m. (CIRCLE ONE)

TPI RATINGS, INC. 424 MADISON AVE. NEW YORK, N.Y.

TELEPHONE INTERVIEW

Tract #_____ Block #_____ Address_____

No Answer ( ) Busy ( )

1. Exact time interview begins _____p.m. a.m. (CIRCLE ONE)

2. How many television sets do you have? _____ (IF "No set"): SKIP TO Q.11

3a. Is (one of) your television set(s) on now? Yes ( ) No ( ) (IF "No"): SKIP TO Q.9

b. (IF MORE THAN ONE SET): Is your other set on now? Yes ( ) No ( )

(FINISH SET #1 BEFORE ASKING ABOUT SET #2)

		SET #1	SET #2
4.	To which channel is this set tuned?	_____	_____
5.	What program is on now?	_____	_____
6.	What was advertised on this show?	_____	_____
		_____	_____
		_____	_____
7.	What is the age and sex of each family member now watching this show?	M__ __ __ __ __ F__ __ __ __ __	M__ __ __ __ __ F__ __ __ __ __
8.	Set checked by interviewer	Yes ( ) No ( )	Yes ( ) No ( )
9.	Was this set tuned into a program at any time from___to___(previous ½ hour)?	Yes ( ) No ( )	Yes ( ) No ( )
10a.	(IF "Yes"): To which channel?	_____	_____
	b. What program was on?	_____	_____
	c. What was advertised on this show?	_____	_____
		_____	_____
		_____	_____

11. What is the age and sex of each family member now at home and not watching television?

M__ __ __ __ __
F__ __ __ __ __

12. What is the age and sex of each family member now away from home?

M__ __ __ __ __
F__ __ __ __ __

13. Income: Under $3,000 ( ) $3,000-$4,999 ( ) $5,000-$7,499 ( ) Over $7,500 ( )

Interviewer_____ Date_____

14. Exact time interview ends _____p.m. a.m. (CIRCLE ONE)

WILLIAM ESTY CO., INC.,
New York, N.Y., June 11, 1958.

Mr. MILES A. WALLACH,
President, M. A. Wallach Research, Inc.,
New York, N.Y.

DEAR MR. WALLACH: Thanks for sending me the material covering your Syracuse studies. You asked in your letter if you may use my name in connection with the personal coincidental rating service.

I most certainly believe that personal observation of family behavior in front of the television set is the only accurate way to know what is actually going on. Insofar as your method does this, the data will be superior to any currently available ratings.

I have no reservations in letting you use my name within this frame of reference on a verbal basis. I would not, however, care to have you quote me in print unless I had approved the quotation prior to its use.

Best regards.

Cordially yours,

WALLACE H. WULFECK,
Executive Vice President.

NATIONAL BROADCASTING CO., INC.,
New York, N.Y., June 9, 1958.

Mr. MILES A. WALLACH,
President, M. A. Wallach Research, Inc.,
New York, N.Y.

DEAR MR. WALLACH: I have your June 4 note and the preliminary data prepared in connection with testing the TPI rating method in Syracuse.

I know that Mr. Hugh M. Beville, our vice president for planning and research, has been giving some study to the costs and values of this possible new rating service, and I am forwarding to him the material you sent me.

Yours sincerely,

ROBERT W. SARNOFF.

Senator MONRONEY. Our first witness is Mr. A. C. Nielsen, head of the A. C. Nielsen Co., Chicago, Ill. Mr. Nielsen, we appreciate your taking the time and trouble to come down here and advise us. As I said at the beginning, this is important to us because the function of your reports, or the impact upon the programing for the millions of television viewers throughout the country, is important. We recognize the necessity and the importance of polling and of reporting.

Perhaps the problem that the committee members have—and many of those who have written us, and many of the critics—is not so much with your polls, but rather the self-imposed Supreme Court ruling effect of finality, when it reaches Madison Avenue, on the programs. They apparently, instead of watching the programs or judging their reactions, themselves—this is the beginning and the end of the results of a program. They do not trust their judgment or their evaluation, but the strict, stark figures that come out of the automation that you have furnished in this business. So we are grateful to you for coming up here, and we appreciate your taking time to appear before us.

STATEMENT OF ARTHUR C. NIELSEN, SR., CHAIRMAN, A. E. NIELSEN CO.

Mr. NIELSEN. Thank you, Senator. I am chairman of the board of A. C. Nielsen Co., a corporation which I founded 35 years ago, and of which I am the chief executive officer and controlling stockholder.

The opportunity to appear before your committee is especially welcomed by my company because there is apparently a need to clear up some serious misunderstandings which exist in the field of television

audience research. I shall try to be helpful, and with this in mind I have brought with me from Chicago three of my associates who are experts in several aspects of our subject. I would like to introduce: First, Henry Rahmel, executive vice president and head of our broadcast division; second, Warren Cordell, vice president and chief statistical officer; and third, John Boesel, TV client service executive.

I would also like to introduce Harold Segall, partner of the firm of Gilbert & Segall, our legal counselors in New York.

Much of my material will be presented in the form of these charts, which I trust you will find both clear and interesting.

Your questions will, of course, be most welcome; however, when they deal with a subject which is to be covered in the course of my statement I hope you will permit me to defer my reply for a few moments.

Senator MONRONEY. We would prefer to let you finish your statement, and then interrogate you after that.

Mr. NIELSEN. My first 5 years in business convinced me that the problems involved in the marketing of goods were likely to become fully as important as the problems of manufacturing, and I was shocked at the lack of accurate information and reliable measurements for use in controlling the vast marketing operations of industry.

There seemed to be far too much guessing—too much "flying by the seat of the pants"—in matters which involved millions of the stockholders' money and, equally important, affected the cost of distribution and therefore the standard of living of the Nation.

Powered by youthful enthusiasm and uninhibited by any real knowledge of the practical difficulties involved, I organized A. C. Nielsen Co. in the hope of helping American corporations apply, to their marketing problems, the precise and reliable procedures and measurements with which I had become familiar in the course of my studies and practical experience in electrical engineering.

After 10 years of very discouraging difficulties, involving large losses, my company finally developed, in 1933, a type of accurate, factual marketing research service which now covers 11 countries and is by far the largest marketing research operation in the world. It guides the marketing operations of the vast majority of important corporations in the food, drug, and allied industries, which spend about 60 percent of all the consumer advertising appropriations.

This service is known as the Nielsen Food and Drug Index, and in certain countries it is supplemented by parallel services for pharmaceuticals, confectionery, tobacco, photographic equipment, and so forth.

Briefly, these services measure continually, and with great accuracy, the rate at which each brand of goods is flowing across retail counters to the consumer. They also record, for each brand, a vast amount of additional marketing information such as retail distribution, out-of-stock, displays, prices, retail gross profits, and so forth.

Each client receives this information not only in respect to his own brand but also in respect to each brand marketed by his competitors. Thus our client can determine, promptly and accurately, not only the result of each marketing strategem of his own but also each marketing operation of his competitors. Skillful use of such intelligence enables each client to employ the most efficient and profitable methods of marketing and to avoid costly errors.

The comprehensive nature of these services is suggested by a glance at a typical bimonthly report. The one I have here [indicating] covers the subject of ready-to-eat cereals. It contains over 200,000 facts and figures. Each year we produce about 5,000 different reports of this type. If we could manage to get them into a single pile it would be higher than the Empire State Building.

The quickest and simplest way to suggest the importance of these services is to tell you that many clients pay over $100,000 a year, while some pay about $1 million a year.

Our clients soon learned, through the use of these services, that it is often possible to place an accurate yardstick on business phenomena which had previously been considered too intangible or too difficult to measure, and they learned that while such services are necessarily costly, they can bring benefits far greater than their cost.

Now most of these clients were large users of broadcast advertising, and they became increasingly concerned over the fact that their executive decisions in this particular segment of their marketing operations were being made on the basis of information and yardsticks which they considered seriously inadequate in respect to both accuracy and scope.

Therefore, in 1936, they invited our attention to an interesting invention which had just been made at MIT, a device which could apparently provide, for the first time, really accurate measurements of the audience reached by each network broadcast, in addition to providing a vast array of additional information of great practical value and never before available.

In response to these requests we undertook the task of developing, for the broadcasting industry, an accurate, factual service of very broad scope.

After 7 years of preliminary research and pilot operations, the technique was applied commercially to network radio in 1942, and in 1950 we added network television. Subsequently we inaugurated local or station services, for both radio and television, using a modified technique.

The practical difficulties involved in developing and establishing these services are shown clearly by the fact that over an interval of 23 years the aggregate net loss incurred in the development of Nielsen meter-based broadcast services in the United States was $10,334,251, and if we add the capital expenditures of $2,102,000, the grand total is $12,436,251.

It seems safe to say that this is the largest expenditure and investment ever made in developing a factfinding research service for industry.

While we have not yet earned a profit on these services, we have had the satisfaction of seeing our national network services, both radio and television, accepted as the "bible" of the broadcasting industry. And our local services, although established only recently, have already achieved a position of major importance.

Before proceeding with the details of today's subject, let me give you a few quick facts about my company, facts which seem pertinent to your investigation.

The Nielsen research organization, founded 35 years ago, is now, by far, the largest in the world in respect to both marketing research and audience research. Annual sales are currently running at the rate of about $24 million, of which audience research represents about 22 percent.

Services are furnished in 11 countries, and the total number of full-time employees exceeds 3,500.

Over 1,000 corporate clients are served continuously, and the fees paid run as high as $1 million a year per client. Client turnover averages only about 3 percent per annum, a record seldom reached in the field of business service.

We produce about 5 billion new facts and figures each year and perform approximately 50 billion statistical operations.

Our facilities include capital in the amount of about $5,500,000 and automatic machines to the number of about 20,000, including one of the world's largest installations of electronic data-processing equipment furnished by International Business Machines Corp. We occupy space in 21 different buildings, of which we own 7 and lease 14.

I give you these facts not because of any desire to pat my company on the back but merely because I have found that many people are still under the impression that marketing research and audience research are performed by a few long-haired statisticians working in a dingy attic and equipped with a calculating machine of ancient vintage. As you can see, we are scarcely in this category.

Our facilities for accurate, thorough marketing and audience research are so unique and our techniques so interesting that over 10,000 business executives from 26 countries have visited and inspected the Nielsen Building in Chicago. I hereby extend to your committee a most cordial invitation to do likewise, because only through such a visit could you acquire a wholly adequate basis for judging our work.

The accuracy, dependability, and usefulness of Nielsen research techniques are suggested not only by the large number of prominent clients who rely on our work, and the rather substantial fees they pay, but also by the steadily increasing acceptance and use of Nielsen services throughout the world.

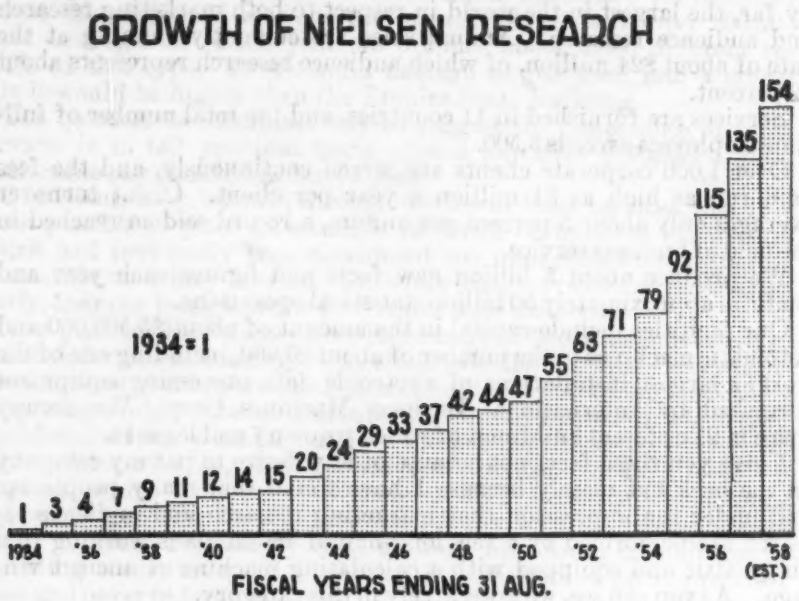
Chart 1 shows that sales have increased 154-fold since 1934, and that there has not been a single interruption for 24 years in this unusual record of growth and progress. These are index figures, with 1934 set at unity.

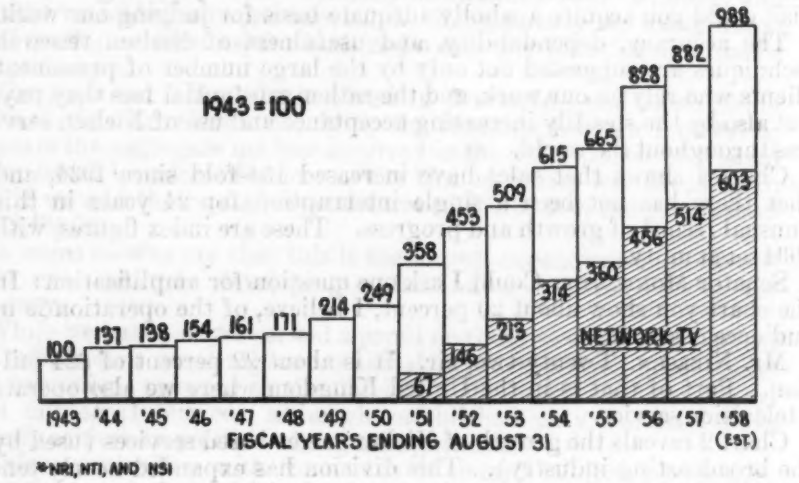
Senator MONRONEY. Could I ask one question for amplification: In the chart you show about 20 percent, I believe, of the operation is in audience research.

Mr. NIELSEN. Twenty-two, sir. It is about 22 percent of $24 million. Part of that is in the United Kingdom where we also operate a television service.

Chart 2 reveals the growth of Nielsen meter-based services (used by the broadcasting industry). This division has expanded nearly tenfold since 1943, and the national network television service, established in 1950, has shown even more rapid growth.

(Charts 1 and 2 are as follows:)





Senator MONRONEY. What is the significance of the shading?

Mr. NIELSEN. The network TV service is shaded, and that goes from an index figure of 67 in 1951 to 603 in 1958, which is 9 to 1 in that short interval of time.

Senator MONRONEY. And that represents the TV?

Mr. NIELSEN. Yes. That is the part you are concerned with today.

Senator MONRONEY. Yes, primarily. We are glad to have the other because it shows the experience of the corporation.

Mr. COX. Is part of the other, nonnetwork television service included?

Mr. NIELSEN. This is the meter-based service, which would include nonnetwork, which, however, is much smaller than the network at the present time.

Senator MONRONEY. Excuse us for interrupting. I thought it would be a little clearer to identify the figures as we go along.

Mr. NIELSEN. While the Nielsen organization now furnishes research services of 14 different types, the one with which we are concerned today is the National Nielsen Television Index, which measures network television and also any spot TV activities which cover substantial areas.

Although Nielsen services also cover local television, as well as both network and local radio, my testimony today does not embrace these activities.

I ask you to bear in mind, as you weigh the facts I am about to present, that the research technique employed in the conduct of National Nielsen Television Index Service involves nothing haphazard or slipshod. There is no guesswork whatever. The processes used both in gathering the necessary information about television viewing and in converting the information into finished reports are carried out almost entirely by automatic, mechanized methods, employing some 1,300 automatic machines, including some of the finest electronic equipment in the world. And the full-time personnel used in our broadcast division, numbering over 600, includes many executives, researchers, statisticians, engineers, and technicians who have specialized in this field for 10 to 20 years.

The net result is a service unique in the vital respects of accuracy, scope, and usefulness.

I'm sure the committee recognizes the fact that audience research is a subject to which thousands of intelligent researchers have devoted their entire business careers; in fact, the subject is so complex and technical, in both its statistical and electronic engineering aspects, that I can present only a bird's-eye view here today. I shall therefore concentrate on four basic questions which, I have good reason to believe, are in your minds.

There may be others, of course, but the ones I am aware of are:

First, the question of the integrity of this type of service; is it subject to influence from certain types of customers?

Second, accuracy.

Third, the practical effect of the service on the public, and on the television artists, producers, and others who have a pecuniary interest in television programing.

Fourth, consideration of the alternatives to audience research. If you had no audience research what would the situation be?

When I speak of integrity, the first of these questions, and by far the easiest to answer, I refer to the question which has been asked or implied, apparently seriously, as to whether the findings of a research company can actually be altered by pressure from its customers. Speaking for my own company, the answer is an unqualified "No"—and if I were testifying under oath, my answer would be the same.

Perhaps you will not find it difficult to accept this answer if you consider the simple fact that if customer A succeeded in persuading us to distort our figures so as to help him and hurt others, it wouldn't be long before we would lose his confidence because he would realize that other customers could influence us in some way which would injure him.

Let me also remind you that our broadcast division derives its income from customers of many types, that the commercial interests of these customers are often opposed to one another, and that any Nielsen figure which appears to favor any customer unfairly is immediately challenged by others, and unless we could prove our accuracy and integrity in such cases we could never maintain the confidence of our clients.

Due to the unusual complexity of our work, we are in fact challenged quite frequently, and the fact that we do retain the confidence of our clients and that our business grows every year suggests that we have been able to demonstrate that we conduct our research work with both skill and integrity.

These demonstrations are facilitated by our policy of allowing clients an unrestricted opportunity to inspect all our operations. Thousands of them have availed themselves of this opportunity, and the fact that they continue to buy our services in increasing quantities suggests that they have been favorably impressed.

In addition to the foregoing practical considerations which would render it impracticable for a responsible research organization to tamper with its figures, there is the obvious moral point. I hope I am not naive in my conviction that a professional organization could not acquire and maintain continuously the confidence of a thousand corporate clients on three continents, and furnish figures on the accuracy of which these clients risk billions of dollars in their marketing operations, unless its affairs had always been conducted in an entirely honorable manner under all circumstances.

Let us turn next to the question of accuracy. Here the audience researcher faces an unusually difficult problem. The circulation of a magazine or newspaper is not difficult to measure. The audience to a motion picture is not so difficult, either; it's just a matter of counting the tickets sold at the various box offices.

But when an entertainer stands before a TV camera, and the picture goes out into space, how on earth can you ascertain how many of America's 43 million TV families actually saw the picture?

Let me cite some of the basic difficulties:

In the typical home there are 2 to 10 persons, including children, which present some problems. They operate 1 or 2 receivers; they view TV at all hours of the day and night, you never know when they are going to turn the set on or off or turn the set from one station to another. They switch the dial among 2 to 8 or more stations.

In an interview, by telephone or in person, you can either measure only a short period of time by asking the respondent what he is viewing right now, or it requires reliance on memory over a long period of time if you choose to ask the respondent what he has viewed during the past few hours, or during the past day.

An interview may not cover all members of the family. It is difficult to gather the entire family at any one moment. It is generally limited, by economics, to urban areas. If you try to interview a true sample of American homes you have a hopeless task from the standpoint of cost. It depends on memory for the early and late hours at which interviewing is impractical.

Now, a diary—and here I am speaking of the kind of diaries not mechanically controlled, as the Nielsen Co. does with a recording device for local services—the ordinary diary generally has difficulty in getting a true sample. It is difficult to persuade average people to keep all these detailed records, and it generally involves errors and omissions that are both serious and undetectable; and the fact that the errors are undetectable is very serious.

Mr. Cox. The only degree of control permitted by your Recordimeter, Mr. Nielsen, is that it serves as a reminder to the diary keeper, at periodical intervals, to make an entry if he or she is there to see the light flash or to hear the buzzer buzz?

Mr. Nielsen. Before I answer that, may I remind you that the Recordimeter, of which you speak, is not the instrument that I am discussing today—which is the Audimeter—and that the Recordimeter is used only for the local services. It not only reminds the viewer by a flashing light every 30 minutes to make the recordings, but it also has—as you can see from the one we have here—a dial showing the number of hours and tenths of an hour that the set has been used each day. When the diary recordings come in, we add up the total number of quarter hours for which diary entries are shown each day, and if they do not agree reasonably well with the actual time the set was turned on during the same day, we assume that this diary has not been kept meticulously for that day—whereupon the diary information for that day is rejected.

Mr. Cox. What are the limits?

Mr. Nielsen. This is not national network service.

Mr. Cordell. They are within a narrow range of the number of hours indicated, because you cannot be sure that each 15-minute segment recorded represents viewing for the full 15 minutes; it might have been 12 minutes; but unless it is within a range of about plus-or-minus 10 or 15 percent, we would assume that it was not kept properly.

Mr. Cox. They are not to record in the diary less than 5 minutes, or something of that sort?

Mr. Nielsen. They are asked to record viewing of more than 5 minutes.

Mr. Cox. Therefore, you might have intervals, before or after a particular program segment in which they were interested, which would record on the device but which would not be reflected in the diary?

Mr. NIELSEN. That is why you have to use a limit of, say, 15 percent.

Mr. Cox. This cannot be sent in to you, I gather, as the Audimeter cartridge is. Is this checked in the home?

Mr. NIELSEN. That is recorded by the housewife, or someone in the family, once a day.

Mr. Cox. She makes an entry of the figure in the diary, also?

Mr. NIELSEN. That is right.

Now, it was in an effort to solve the problem I've just mentioned, and many other serious difficulties, that we developed the "Nielsen Television Index" technique.

The Neilsen-developed precision device known as the Audimeter is the heart of our technique. It is a high-precision electronic instrument, and one of its characteristics is that no one needs to visit the home very often because we mail a little cartridge like this [indicating] to the housewife every 2 weeks, and she throws a lever taking the old one out, and pushes the new one in.

Mr. Cox. Where is this installed in relation to the set—on top of the set?

Mr. NIELSEN. It can be put in a closet, or it can be put in an end table, which we can furnish as a piece of furniture, in a compartment underneath. It is not in sight at all, although somebody in the house must know where it is.

Mr. Cox. It is simply connected to the set by wire?

Mr. NIELSEN. Yes. Electrically.

Senator MONRONEY. That gives mileage on programs?

Mr. NIELSEN. I will explain in a moment what it shows, sir.

Connected to TV receivers in typical homes throughout the country, these electronic instruments record—every minute, day and night—whether the set, or sets, if there are more than one, are on or off, and when on, the station or channel to which each set is tuned.

Each Audimeter can record the viewing and listening on four receivers, whether radio or TV. In the occasional home having more than four receivers we install two Audimeters.

This instrument contains 4½ months' supply of film. The film starts to feed as soon as this cartridge is inserted, and when the old cartridge is removed, the film is automatically cut off.

Mr. Cox. How is the film replaced?

Mr. NIELSEN. We have to visit the home once every 4 months for that purpose.

Chart 3 shows a section of a typical record of TV viewing in a home. It has been produced by the Audimeter on 16-mm. film. The code marks on this film denote the exact minute the receiver was turned on or off and, for every single minute of viewing, it shows the channel or station selected. Every receiver in the home telegraphs to this instument, and its tuning is then recorded in code on the film.

The typical film as now operated covers 2 weeks of viewing in the home and contains more than 20,000 1-minute records of viewing or nonviewing, assuming that the home has only 1 television set. If there are two TV sets, the film contains about 40,000 records, and if

the home also has 2 radio receivers the film contains about 80,000 records.

Unless someone wants to ask questions on this, I won't go into the mathematics. It permits automatic inspection and decoding by electric eyes.

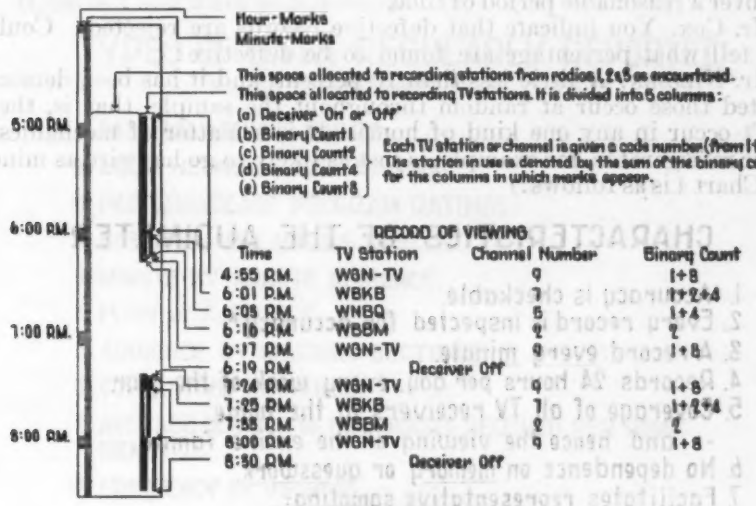
Mr. Cox. When this reaches your headquarters it is not scanned by an individual; it is read by a machine?

Mr. NIELSEN. Yes, sir. An individual is attending the machine.

Mr. Cox. But I mean the derivation of the information from this is done mechanically?

Mr. NIELSEN. That is right.

(Chart 3 is as follows:)


Hour-Marks
Minute-Marks
This space allocated to recording stations from radios 1, 2 & 3 as encountered.
This space allocated to recording TV stations. It is divided into 5 columns:
(a) Receiver "On" or "Off"
(b) Binary Count 1
(c) Binary Count 2
(d) Binary Count 4
(e) Binary Count 8
Each TV station or channel is given a code number (from 1 to 15). The station in use is denoted by the sum of the binary counts for the columns in which marks appear.
5:00 P.M.
6:00 P.M.
7:00 P.M.
8:00 P.M.
RECORD OF VIEWING
Time
TV Station
Channel Number
Binary Count
4:55 P.M. WGN-TV 9 1+8
6:01 P.M. WBKB 7 1+2+4
6:05 P.M. WNBQ 5 1+4
6:16 P.M. WBBM 2 2
6:17 P.M. WGN-TV 9 1+8
6:19 P.M. Receiver Off
7:24 P.M. WGN-TV 9 1+8
7:25 P.M. WBKB 7 1+2+4
7:55 P.M. WBBM 2 2
8:00 P.M. WGN-TV 9 1+8
8:30 P.M. Receiver Off

FILM RECORD OF TV VIEWING
(Mailable Audimeter)
The complete film measuring one home for 2 weeks, contains 20,160 one-minute records, in code.

Mr. NIELSEN. On chart 4 we have listed the principal characteristics of the Audimeter. First, its accuracy is checkable, as I will show you in a moment, and it is quite a trick to get an instrument that will tell on itself when it makes a mistake and reveal that fact.

Every record is inspected for accuracy, and I will show you in a moment the machine which does that. A record is made every minute. It records 24 hours per day every week of the year. There is coverage of all TV receivers in the home and, hence, the viewing of the entire family. There is no problem of how to get data from all the family. There is no dependence on memory or guesswork. It facilitates representative sampling because we can get it into rural as well as urban areas, and we can get it into nontelephone as well as telephone homes. It permits continuous measurement of the same homes, which is a very important point, not appreciated, I will confess, by me when we started this service. It uses a fixed sample, substantially the same homes, week after week. By doing that we can justify the cost of a very accurate sample selection.

To put it another way, if we had to select a new sample every week we could not spend several hundred thousand dollars to select the sample, as we do. It insures the maximum accuracy of trends, because if your objective is to ascertain whether a program is increasing or decreasing in its audience, obviously if you can stay with the same homes you get higher accuracy. The best calculations we can make show that a shifting sample would have to be about 2½ times as large to get the same accuracy, as to trends, as we get with a fixed sample. Measurement of the number of different homes reached by a series of telecasts can be done only with a fixed sample, and this is probably the most important measurement for the advertiser, because it shows the total number of homes his advertisement is reaching over a reasonable period of time.

Mr. Cox. You indicate that defective records are rejected. Could you tell what percentage are found to be defective?

Mr. NIELSEN. A little less than 10 percent, and it has been demonstrated those occur at random throughout the sample, that is, they don't occur in any one kind of home. It is a matter of mechanics. Your refrigerator, for example, is just as likely to go haywire as mine.

(Chart 4 is as follows:)

CHARACTERISTICS OF THE AUDIMETER

1. Accuracy is checkable.
2. Every record is inspected for accuracy.*
3. A record every minute.
4. Records 24 hours per day, every week of the year.
5. Coverage of all TV receivers in the home.
   ---and hence the viewing of the entire family.
6. No dependence on memory or guesswork.
7. Facilitates representative sampling:
   (a) Rural as well as urban.
   (b) Non-phone as well as phone homes.
8. Permits continuous measurement of same homes (ie, a fixed sample):
   (a) Justifies cost of accurate sample selection.
   (b) Ensures maximum accuracy of trends.
   (c) Measures cumulative audience (different homes reached by a series of telecasts).

* ANY DEFECTIVE RECORDS ARE REJECTED

Mr. NIELSEN. A battery of automatic film inspection machines—developed by Nielsen Engineering Laboratories—inspects every one of the thousands of code marks on each film and detects any defects. By rejecting and discarding every defective record, we insure the accuracy of every piece of basic information that goes to make up "Nielsen Television Index Reports." This work requires 14 girls. We have recently developed a wholly automatic machine with one girl attending the machine to do the entire job, and this machine has the interesting characteristic of printing the final results, showing what the defects were in every film that was discovered to be defective.

The next step in our production procedure employs a battery of automatic film decoding machines, an invention resulting from the

combined efforts of the Nielsen Engineering Laboratories, Eastman Kodak Co., and International Business Machines Corp. These machines take each film which has passed inspection and, through the use of electric eyes and other devices, automatically actuate IBM key punches which prepare tabulating cards showing every fact and figure on the films. Thus, the viewing information is converted to a form in which it can be tabulated and computed by wholly automatic electronic methods.

Finally, in our tabulating department a great number and variety of electronic IBM machines convert the basic TV viewing data into the forms of finished reports, the principal contents of which are listed on charts 5 and 6.

(Charts 5 and 6 are as follows:)

TYPES OF DATA REGULARLY REPORTED

NIELSEN TELEVISION INDEX · COMPLETE SERVICE

1. GENERAL VIEWING HABITS.
2. MULTI-NETWORK AREA RATINGS.
3. PER BROADCAST PROGRAM RATINGS.
4. COST PER 1000 HOMES REACHED.
5. MINUTE-BY-MINUTE AUDIENCE.
6. FLOW OF AUDIENCE.
7. AUDIENCE BY MARKET SECTIONS.
8. CUMULATIVE AUDIENCE.
9. AVERAGE NUMBER OF BROADCASTS RECEIVED PER HOME REACHED.
10. FREQUENCY OF VIEWING.
11. AUDIENCE COMPOSITION (NUMBER, AGE AND SEX OF VIEWERS)

CONTENTS of NIELSEN TV RATINGS REPORTS

(SEMI-MONTHLY)

1. Homes-using-TV (each Quarter Hour)
2. For each sponsored Network program:
   - (a) Program Coverage
   - (b) Total Audience (% of Homes)
   - (c) Total Audience (No. of Homes) — (1) Each Week
   - (d) Average Audience (% of Homes) — (2) 2-Week Averages
   - (e) Average Audience (No. of Homes)
   - (f) Share of Audience

Mr. NIELSEN. The "Ratings Report," which comes out twice a month, shows homes using TV each quarter hour. For the sponsored network programs it shows coverage, that is, the percentage of TV homes in the country which could have viewed that program if they had wanted to. It shows the total audience in percent of homes, which we define as the total number that viewed 6 minutes or more of the program. It also shows the total audience expressed in number of homes. It shows the average audience; the audience of course fluctuates throughout the program, and this is the average number tuned to the program, expressed both in percent and number of homes. Finally it shows the program's share of the total audience. It does that for each week, and also expresses it in the form of 2-week averages, which is especially useful for the lower rated reports, because it increases the statistical accuracy.

The bimonthly "Complete Reports" are rather comprehensive, as you can see [indicating]. They show general viewing habits; multi-network area ratings, in the areas that can view all three networks; the per-broadcast program rating such as we had in the pocket report; the cost per thousand homes reached; the minute-by-minute audience; the flow of the audience; the audience by market sections—for instance, homes of high socioeconomic characteristics versus low or urban versus rural; cumulative audience, which I mentioned a moment ago; the average number of broadcasts received per home reached; the frequency of viewing; the audience composition, that is, number, age, and sex of viewers.

Mr. COX. How is that determined?

Mr. NIELSEN. By using another sample of homes equipped with Recordimeters, primarily for the purpose of determining audience composition. The Audimeter has not yet been trained to determine the age and sex of the viewers. We have some ideas on that, but we haven't been able to work that out.

Mr. COX. What is the number of homes used to determine that?

Mr. RAHMEL. Twelve hundred, a matched sample.

Mr. NIELSEN. A matched panel, which means that it has been selected in the same manner as the panel that is equipped with Audimeters.

Mr. COX. But not the same homes?

Mr. NIELSEN. No.

The practical applications of this information will be described in a few minutes. At the moment I wish merely to invite your attention to the fact that TV audience research, as conducted by A. C. Nielsen Co., is by no means limited to program ratings. That is important, because nearly all the writers talk about ratings. The popular impression is that program ratings are the beginning and the end of this sort of work. Actually, as you can see from chart 6 ratings (item 3) comprise only roughly one-eleventh of the scope of our complete reports.

At this point I'd like to clarify one important point on which some rather confused thinking seems to exist. As you have seen, the Audimeter records the definite, physical act of tuning the set, rather than attempting to measure viewing or listening, which are very hard to define precisely, because each respondent, if you ask him, is obliged to make his own decision as to the degree of attentiveness which should be construed as listening or viewing.

Attempts to measure viewing furnish rather dubious measurements which cannot be interpreted with precision; hence, there are limitations on the practical value of any comparison between tuning (as measured by Audimeters) and viewing (as measured by the only means available).

Mr. Cox. Where you use the diary, do you also have these people report the programs which they view, or do you confine the information that you seek from them to the number, age, and sex of people actually viewing?

Mr. NIELSEN. We get both.

Mr. Cox. At this point you must depend on them for this decision as to whether they were viewing, or their degree of attentiveness?

Mr. NIELSEN. That is right. That is the limitation of the local services. That has nothing to do with the network services, except for the audience composition type of information.

Mr. Cox. Isn't there danger some of the sets may be turned on at times with no one watching?

Mr. NEILSEN. That happens occasionally, and I will deal with that in a moment, sir.

Neverthless, while it is difficult to compare tuning, and so-called viewing, we have conducted comprehensive surveys on the subject, seeking to determine the percentage of cases in which respondents stated that there was no viewing or listening but in which our inquiry also revealed that a TV receiver was actually turned on. Some of our larger clients, spending tremendous sums in television, naturally wanted to know the answer to that question, and they approved the techniques used.

The latest of these surveys shows that the average difference between (*a*) tuning, and (*b*) viewing and/or listening, averages only nine-tenths of 1 percent; for example, the difference between ratings of 10.09 percent and 10 percent.

I make that distinction because when I say nine-tenths of 1 percent I am not talking about a difference between ratings of 10 and 10.9; I am talking about a difference of 0.9 percent of the rating, i.e., the difference between 10.09 percent and 10 percent.

Senator MONRONEY. What is the base, the same as the 1,200, to get that figure?

Mr. NIELSEN. No; that is done by coincidental telephone methods. Fifty thousand telephone calls were used for this purpose.

Senator MONRONEY. I would like to get that amplified later.

Mr. Cox. Did you check all hours of the day?

Mr. CORDELL. All the hours during which you could appropriately make a telephone call, viz., from 8:30 in the morning until about 9:30 at night. We don't call people when we know that we would annoy them and couldn't get the information anyway.

Mr. Cox. The committee has information that one of your competitors claimed at one time to have run a check on a much smaller sample—I believe 500 homes—in the daytime, and to have found that as much as 36 percent of the sets that were turned on were not being watched; so obviously the committee is interested in the degree of the check which you use to correlate tuning to actual attention to the sets, since an untuned set is not going to sell any products.

Mr. NIELSEN. I would be interested in having details of the technique that obtained such a figure.

Mr. Cox. We don't have them; we have the results. Now, maybe someone will come forth to defend them. If not, they won't carry too much weight.

Mr. CORDELL. We made 3 such studies, each involving 50,000 telephone calls. Two of them were confidential for clients, and in the case of the other, we paid a part of the price, which gave us the privilege of divulging the information. All three surveys showed practically the same results.

Mr. Cox. Is there any danger that sets may be turned on by children and left—without their parents realizing, for purposes of response to such a survey, that this has happened?

Mr. CORDELL. No; our technique took care of that. I think the reason for the misunderstanding about the importance of nonattended set tuning is that it does occur occasionally in practically any home, but I think the significant thing you have to keep in mind is that relative to a particular program interval of 30 minutes, the percentage of homes that would have any of this activity, during that short interval, is quite small. Cumulative over a week's time, any home might have been exposed to this, but relevant to the rating, itself, it is a negligible part.

Mr. Cox. I notice in some instances, in some circumstances, the term "responsible person" is used. Does that have a standard definition in the industry? Is this an adult, or a child of a certain age?

For instance, the set in my home is sometimes unattended except for my 22-month-old son, who loves to sit and watch, and is probably exposed to more commercials than I am; but I don't know what good it does the advertiser. Is that an attended set? My wife, if you called, would say someone was watching the set.

Mr. CORDELL. I am sure much of the listening and viewing that goes on in my home is by the children, but it is not unimportant to the cereal manufacturer, for example, who largely is sponsoring those types of programs, because my wife buys the kind of cereal that they are going to eat, and the feelings of the children are generally taken into consideration in buying products which they consume.

Mr. NEILSEN. Perhaps I had better give you the other figure, I have only told you half the story. I have told the difference between (*a*) tuning and (*b*) viewing and/or listening. I will now give the difference between (*a*) tuning and (*b*) viewing and listening. Here the difference averages 11.9 percent, which, for example, would be a difference between a rating of 10.19 percent and 10 percent. The difference is slightly higher in the daytime than at night, but there was no hour that averaged more than 3 percent difference.

Now, I ask you to bear in mind that these surveys were made for the Procter & Gamble Co., who not only spend large amounts of money for television, but who probably feel that the prosperity of their whole business enterprise rests to an appreciable extent on the success of their television advertising, and on the wisdom of their decisions as to whether to use television or other media. They have no desire to deceive themselves as to the percent of people who have the set turned on but are not looking at it. They recognize there is a good deal of unattentive reading of magazines and other kinds of advertising. There are certain losses with any type of advertising.

Mr. Cox. In this telephone coincidental survey to check this factor, are the people asked to report only on the current situation in the home—whether the set is then turned on?

Mr. CORDELL. Exactly. That is why it requires so many telephone calls.

Mr. NIELSEN. That is the only accurate way, we believe, of getting substantially the truth, economically, as to what is happening in a home, that is, asking what is happening the instant the telephone rang. If you say what did you do for the last couple of hours, you get not only into memory problems, but you get into the difficulty that the person you are interviewing may not have been there an hour earlier.

Mr. COX. Does your call permit checking these factors? In other words, is the woman, if she is not sure, asked to go into the room where the television set is located to determine this factor?

Mr. CORDELL. Yes. In fact, we ask who is there.

Senator MONRONEY. Do you have any way, in this automation, to find out why they turned the set off—if they start on a program and turn it off, would that not be significant as indicating that they were dissatisfied with the program? It seems to me on a research basis that as practical "advertising" politicians we are more interested in the people we lose than in those who write and say "You are doing a fine job." It is the squeaking wheel that gets the grease, and it seems to me if somebody can develop the system so that the dissatisfied people—and they are dissatisfied by the millions—are turning off the television programing, that would be a more important indication to the people on Madison Avenue as to the quality of programing.

Mr. NIELSEN. It certainly would be valuable. Of course we have made many analyses to see how many people tune out at each minute of the program, and I will show you some curves of that sort in a minute. The program producers get some indications from that.

For instance, if a lot of people tune out when a certain artist comes on, that is significant to them; but there are people tuning out all the time for reasons that have nothing to do with the satisfaction of the program. They may have an appointment or it may be time to put a child to bed.

Mr. COX. I understand Ed Sullivan dropped opera when he found that was a point at which he was losing his audience.

Mr. BOESEL. I understand he is going to have ballet on this Sunday.

Mr. NIELSEN.. The difference between (*a*) "tuning" and (*b*) "viewing and listening" is 1.9 percent (e.g., the difference between ratings of 11.9 percent and 10 percent).

It is obvious that these differences are of no practical importance. This view is supported by our most experienced clients and also by the Advertising Research Foundation's report entitled "Recommended Standards for Radio and Television Program Audience Size Measurements," which makes the statement:

TUNING VERSUS VIEWING

Your committee recommends that the industry adopt the concept of tuning as its standard of exposure. This is the most objective of the various levels of exposure. It is also the simplest and most understandable level of exposure. It is the most inclusive of all exposure measures. It is the only measurement

which does not require a subjective evaluation of some kind on the part of the exposed person (which evaluation is different for different respondents under identical exposure conditions). It is thus the only measurement which is unambiguous since it can only be interpreted one way.

Now, a few words are needed on the technical aspects of our TV work. The Audimeter used today is a far more refined and efficient instrument than the original model invented at MIT in 1936. And the special equipment now used for inspection, decoding, tabulating, and other operations has made tremendous contributions to the accuracy, economy, speed, and usefulness of our work. The automatic decoding machine alone, for example, is estimated to save the full time of 500 workers.

Without these developments, mechanised audience research would probably be impracticable from an economic standpoint. Much of the credit for these developments must go to the Nielsen Engineering Laboratory, where 30 engineers and technicians have wrestled for many years with complex problems which at times seemed impossible to solve.

May I ask Mr. Rahmel approximately how many patents our organization owns as a result of this research work?

Mr. RAHMEL. In all countries combined we now have 96 patents, with an additional 96 patent applications pending.

Mr. NIELSEN. In addition to achieving accuracy and economy, and continually expanding the scope of the information produced, our engineers have made great strides in speeding up the delivery of our reports—effecting, in recent years, a speedup of more than 2 to 1.

Furthermore, in their continual search for the ideal, these engineers—as early as 1946—developed and operated successfully the first system which produced ratings on an instantaneous basis, back in 1947. Two instantaneous installations were operated in New York and Chicago. Over leased lines, automatic telemetering equipment associated with the receivers in the homes, continuously positioned station styli on individual tape Audimeters in the central office.

Crude by today's standards, the 1948 Instantaneous Audimeter nevertheless pioneered instantaneous metering of broadcast audiences.

An improved system has been operated in Chicago since the summer of 1957, and a similar system is now being produced for our use in Great Britain. Operative in Chicago since summer 1957, the newest Instantaneous Audimeter automatically compiles and prints out summaries every 15 minutes. Home-by-home tuning data are preserved on a separate tape for each minute.

While only time will tell whether the additional cost of instantaneous service is justified, our solution of these extremely difficult problems should make it clear that although we have come a mighty long way in the past 23 years, we are certainly not relaxing our efforts to give the television industry a service which, in all respects, is the very best that human ingenuity can produce.

Mr. Cox. You don't now provide an instantaneous commercial service?

Mr. NIELSEN. No. We are selling such a service in the United Kingdom, and it will be available shortly in this country, if it is wanted.

Mr. Cox. The delivery time now is about 3 weeks; is that correct?

Mr. NIELSEN. That is correct.

Senator MONRONEY. The Audimeter you are describing is still based on what base—how many people, viewers, or homes?

Mr. NIELSEN. Our national sample is 1,200 homes. They all have radio sets. About 1,050 of these now have television sets, and that is the national television sample.

Mr. RAHMEL. The number of sets is a little larger than that.

Mr. NIELSEN. Some homes have 2 television sets, hence there are somewhat more than 1,050 sets.

Senator MONRONEY. But 1,050 homes throughout the Nation?

Mr. NIELSEN. That is right, and I will deal with that subject in a moment.

Mr. COX. Is this instantaneous device attached to the same homes in Chicago that are used for the other equipment?

Mr. NIELSEN. Yes, because we want to check its accuracy.

I have demonstrated thus far that the "Nielsen Television Index" technique, based on the Audimeter, produces—from each home—TV viewing records that are both accurate and comprehensive.

While this is an important and essential step in the whole task of getting accurate results, there is one other step of fully equal importance, viz, the selection of a sample (of American TV homes) for installation of the Audimeters—a sample of sufficient quality and size to insure results of sufficient accuracy for commercial purposes.

The use of sampling is not confined to audience research. Sampling has won recognition by rate fixing bodies and by the courts, and it has long been an accepted practice—of proven reliability—in countless fields of human endeavor, a few of which are as follows:

COMMON APPLICATIONS OF SAMPLING

1. U.S. Bureau of the Census
2. Federal Reserve Board
3. U.S. Department of Agriculture (grain)
4. Dairy industry (butterfat content of milk)
5. Coal industry (heat value of coal)
6. Chemical industry (purity of chemicals)
7. Boards of health (bacteria in milk)
8. Waterworks (bacteria and chlorine in water)
9. Medical profession (blood analyses)
10. Manufacturing (inspection of small parts)

Mr. COX. Some of those would be more homogeneous in character than the population of the United States, so you have to add additional factors in the development of your sample to adjust to that?

Mr. NIELSEN. It means there is greater difficulty in making sure you get what we call a representative sample, and I will show you in a moment how that is done.

Although, as you can see, sampling is very widely used, it is actually a subject of great complexity—often requiring, for its sound practical application, thorough familiarity with the higher forms of mathematics.

To illustrate this fact, I have brought with me a 2-volume, 970-page treatise dealing solely with the subject of "Sample Survey Methods and Theory," written by Hansen and Hurwitz of the U.S. Census Bureau and Madow of the University of Illinois—and of course this is only one of several works on the subject.

In view of the complex and technical nature of the subject—a fact well known to all experienced statisticians in universities, in govern-

ment, in the professions, and in business—we are amazed at the alacrity with which laymen, having no knowledge whatever of this highly technical subject, often presume to pass judgment on the quality and size of the samples used by experts who have devoted their lives to a study of the subject.

Such opinions of laymen are as meaningless as if they were to pass judgment on the formula used, by the metallurgists of United States Steel Corp., for making high-speed tool steel—or on the formula used by Parke, Davis & Co. in compounding a complex drug for the medical profession.

But despite the complexities of sampling, certain basic principles of audience research sampling are not difficult to grasp. These are shown on chart 7.

(The chart is as follows:)

PRINCIPLES OF SAMPLING - TV AUDIENCE RESEARCH

1. Each TV home must have an equal* chance of selection.
2. The statistical error** may then be calculated by an accepted and provably correct formula:

$$\text{STD. ERROR} = \sqrt{\frac{\text{RATING (100-RATING)}}{\text{SAMPLE}}} \times \sqrt{\frac{\text{UNIVERSE - SAMPLE}}{\text{UNIVERSE}}}$$

Example:

$$\text{S.E.} = \sqrt{\frac{20 \times 80}{1{,}000}} \times \sqrt{\frac{43{,}000{,}000 - 1{,}000}{43{,}000{,}000}}$$

$$= \sqrt{1.6} \times .99998$$

$$= \pm 1.26 \text{ POINTS}$$

Chances are 68 out of 100 that error will be less than 1.26
Chances are 95 out of 100 that error will be less than 2.52
Chances are 99 out of 100 that error will be less than 3.15

* OR A KNOWN CHANCE.
** TECHNICALLY KNOWN AS THE "SAMPLING ERROR"

Mr. NIELSEN. The first principle of sampling is that each TV home must have equal or known chance of selection.

Mr. COX. This refers to the number of signals available?

Mr. CORDELL. This is with regard to the chance that the particular home is going to be selected for measurement.

Mr. NIELSEN. Your home had the same chance as mine.

Mr. COX. It doesn't work out that way.

Mr. CORDELL. Neither one is included.

Mr. NIELSEN. You mean you got cheated; I haven't got an Audimeter either. [Laughter.]

The statistical error, which is a layman's term for what the experts call the sampling error, may then be calculated by an accepted and probably accurate mathematical formula, which is this: The standard error is the square root of the rating multiplied by 100 minus the rating and divided by the sample size. Notice that the rating is the percent of homes that viewed the program, and 100 minus the rating is the percent that did not. You also multiply by a second element,

which generally means nothing, and which is the square root of the universe minus the sample divided by the universe.

Senator MONRONEY. What is the universe?

Mr. NIELSEN. The total number of TV homes in the country, now about 43 million. This will be clearer if you let me take some finite figures to illustrate.

To determine the standard error for a rating of 20 percent, using a sample of 1,000 homes, you first take the square root of 20 multiplied by 80 and divided by 1,000. Then you multiply this by the square root of 43 million (the universe, or number of TV homes in the country), minus 1,000 (the sample) and divide by 43 million. As in nearly all commercial sampling operations, the second element in the formula becomes unity (0.99998 in this particular case), so obviously it has no material effect on the final result and may therefore be neglected. The standard error in this case equals the square root of 1.6, which is plus or minus 1.26 points.

Since we are dealing with standard error, the chances are 68 out of 100 that the error will be less than 1.26 on the rating of 20, which we are trying to measure.

Mr. Cox. Where does the 68 come from?

Mr. NIELSEN. That is a statistical fact; that is, it is the definition of standard error. When measuring a rating of 20, the results will be between 21.26 and 18.74 in 68 percent of the cases. If you want to look at it another way, the chances are 95 out of 100 that the error will be less than 2.52, which is twice the standard error of 1.26. In other words, 95 percent of the time, if you made a large number of these measurements, the result you would get, if the truth were 20, would be between 22.52 and 17.48. Or if you want to get meticulous about it, if it were a matter of life and death, the chances are 99 out of 100 that the error would be less than 3.15.

Senator MONRONEY. Where do the 68, 95, and 99 originate?

Mr. CORDELL. Those are the characteristics of a normal curve which apply under this particular probability formula.

Senator MONRONEY. As to TV listening habits, or just the general area, in bacteria, water——

Mr. CORDELL. In anything.

Senator MONRONEY. Or in metal examination, or babies born, and so on?

Mr. CORDELL. That is right.

Senator MONRONEY. It comes out of standard books?

Mr. CORDELL. This is a characteristic of the normal curve.

Mr. Cox. Is this figure—let's take 3.15. Is that a percentage of the rating, or is that a percentage of the sample?

Mr. NIELSEN. 3.15 of the 20. In this case it would be about 16 percent plus or minus.

Mr. CORDELL. These are percentage points.

Mr. Cox. In other words, on a rating of 20, does that mean that if you wanted to be this accurate, the only assurance you can generally give is that the rating is someplace between approximately 17 and 23?

Mr. NIELSEN. If you want 99 chances out of 100 of being right. But that isn't practical. In winning on the stock market, you need only 51 percent. For commercial purposes, the standard error is normally used. If you are in doubt about a rating, all you need do is wait a

couple weeks more and get another, and see if it is consistent. Very few executives would make a decision based on one rating. They want a series; first the rating, then a trend. The program might have a low rating, but if it is going up, they might want to stick with it.

Senator MONRONEY. The standard comes from all types of statistical work—so many men out of 1,000 have flat feet, and so on?

Mr. CORDELL. That is right.

Mr. Cox. As the size of the rating—you use 20 here—goes up or down, does the margin of error increase or decrease?

Mr. NIELSEN. As the size of the rating goes up, the error expressed in number of points increases, but in percent of rating it decreases. In other words, the higher rated programs are measured more accurately than the lower rated.

Mr. Cox. If you got, then, to a rating of 30, your variation, at 68 out of 100, might then be 1½?

Mr. NIELSEN. About 1.45, which is a little higher than 1.26, but less in relation to the 30 than 1.26 is in relation to 20. The bigger ratings are more easily measurable. In these reports we give figures not only for each week, but also as an average for 2 weeks, and in general that reduces the error by 20 percent. If you have a low-rated program and you want to play safer, you use the 2-week average.

Mr. Cox. You rely for interpretation of trend upon the client's retention of these earlier reports? In other words, he would have to maintain records in order to establish what the previous ratings had been?

Mr. NIELSEN. That is true. We have a client service department, however, which maintains these records and presents graphic illustrations to each client at periodic intervals, and we keep them all informed. Most of our clients also have research departments of their own which maintain records of trends.

Now, it is important to note here that high accuracy for commercial purposes is obtainable from a sample which the typical layman would consider too small. It doesn't do much good to increase the sample size because this square root formula means that in order to cut these errors in half, you wouldn't merely have to double the sample size, you would have to quadruple it.

If you made your sample nine times as great, the errors would only be cut to one-third their present size, and the cost would become many times as great. Of course, all samples in research are set at the economic level, which is determined by a good deal of practical experience.

I have had considerable experience in selling research in many different countries and with many different sample sizes, each sample size being attuned to the problem of measurement involved, and I never yet saw a case where the typical businessman didn't say the sample was too small, and on being asked how big he thought it would be, he would usually say "twice as big," and when I would ask him for the calculations from which he reached that conclusion, he would always have to admit he didn't really know the first thing about it. In other words, it is a highly technical subject.

For all practical purposes, accurracy is not affected by the size of the universe, that is, in this case the total number of TV homes in the country. Therefore, the moment anyone asks the question, and it

is asked frequently by writers on this subject, How can a sample of only 1,000 families measure the viewing of 43 million families? you know he has no understanding whatever of statistical mathematics. He reveals the fact that he is uneducated on this subject, and while this is nothing to his discredit, it does indicate that he is not qualified to speak or write on the subject. The fact that there are 43 million homes in the universe has virtually nothing to do with the size of the sample needed. We would need about the same sample to measure Chicago, Philadelphia, or any other reasonably small area. If you get down to the city of Winnetka, where I live, which has about 3,000 families, obviously it would be somewhat of a factor.

Mr. Cox. How many homes were included in the sample when you started in 1951?

Mr. RAHMEL. 250 homes for network television.

Mr. NIELSEN. Our sample for network television has always been that portion of our national radio sample which had television, and that has increased. Now, it is about 1,050 homes.

Mr. Cox. You started with the radio sample and simply attached the audimeter in the same homes as they acquired television?

Mr. NIELSEN. Yes, that is the best way to achieve an accurate sample for network television.

Mr. RAHMEL. There was one exception. Our original use of 250 homes did not mean that this was the normal percentage of our radio sample, because we had a disproportionate sample, with extra homes in New York.

Mr. NIELSEN. Perhaps the irrelevance of the size of the universe will be easier for you to believe when you see the infinitesimal sampling percentages used for commercial measurements of utmost importance, and for measurements which are often matters of life or death. Some of these are shown in chart 8.

(The chart referred to is as follows:)

ESTABLISHED SAMPLING RATIOS IN INDUSTRY

PRODUCT	AUTHORITY	PURPOSE	UNIVERSE	SAMPLE	RATIO
1. GRAIN	U.S. Dept of Agriculture	(a) Grade (Value)* (b) Disease (Ergot)**	57,600 qts. (1 carload)	2 qts.	28,800
2. MILK	Bowman Dairy Co.	Butterfat*	25,000 pints (1 tank car)	0.5 pint	50,000
3. COAL	Peabody Coal Co.	(a) Heat units* (b) Ash, etc.*	1,600,000 oz. (1 carload)	1 oz.	1,600,000
4. MILK	Chicago Bd. of Health	(a) Butterfat* (b) Bacteria**	72,000,000 oz. (Daily output)	28 oz.	2,570,000
5. BLOOD	Medical Sources	Anemia Leukemia, etc.**	5,200,000 mm^3 (1 person)	1 mm^3	5,200,000
6. WATER	Chicago Water Wks.	(a) Chlorine** (b) Bacteria**	5,000,000,000 gal. (Daily output)	5 gal.	1,000,000,000

* A MATTER OF VALUE
** A MATTER OF LIFE OR DEATH

Mr. NIELSEN. We see that for grain, the U.S. Department of Agriculture, to determine both the grade and the presence of ergot, takes a carload and extracts only 3 quarts—a sampling ratio of 28,800 to 1.

In our television work we are dealing with a ratio of about 40,000 to 1.

For milk, the Bowman Dairy Co. of Chicago, in determining butterfat, takes 25,000 pints, which is the capacity of a tank car, and uses a sample of one-half pint, which is a ratio of 50,000 to 1.

For coal, Peabody Coal Co., in determining heat units or ash content, takes a carload of 1,600,000 ounces, and extracts 1 ounce, a ratio of 1,600,000 to 1.

For milk, the Chicago Board of Health takes the whole daily output of 72 million ounces and uses a sample of 28 ounces—a ratio of 2,570,000 to 1.

In sampling blood for anemia or leukemia, a matter of life or death, physicians take 1 cubic millimeter out of 5,200,000. And for water, the daily output in Chicago being 5 billion gallons, the sample is 5 gallons—a ratio of 1 billion to 1. These figures merely suggest that the ratio of the universe to the sample has nothing to do with the accuracy.

Senator MONRONEY. Could I ask you there, and I admit I am not qualified to understand statistical things, but do you consider people's listening habits as consistent in sampling as the matter of ergot in grain, or the contents of butterfat, or the ash content in coal—I always thought people were individuals—and goodness knows, who is going to be able to say what my wife is going to want to look at on television tomorrow night?

Mr. NIELSEN. Scientists tell me there are no two kernels of grain alike in the whole history of the world.

Senator MONRONEY. Aren't you dealing in personal tastes that are variable to a greater extent than two pieces of grain or two globules of butterfat?

Mr. CORDELL. I believe I can answer your question by citing the fact that when you are talking about a particular rating of a program—say, a program last night between 7:30 and 8 o'clock—there are only two relevant statistics. Did this particular family watch the show last night, or did it not. This is quite homogeneous, there are only two possibilities. When you resolve this thing down to essential measurement, there are only two possibilities, and it is just as homogeneous as whether this particular particle of the blood is a white corpuscle or a red one. I think that the thing which concerns you is the fact that obviously homes are not mixed up as thoroughly as blood is, and we, therefore, have a more difficult job reaching in and getting the thousand homes dispersed across the total population. It is a tough job. I don't want to give the impression that drawing these thousand homes isn't a tough job, but once you have done that, the sample is as good as any sample of other thing you would like to measure.

Mr. COX. The fact that between 7:30 and 8 o'clock last night in a home with the Audimeter, the set was on, does not in and of itself indicate anything as to whether it was on in the house next door, or across the street, or down the block. You rely for that completely on the basis on which the sample was originally selected?

Mr. CORDELL. I am talking about the total activity we are trying to measure, which is that out of the 43 million homes, a certain number watched this program on a particular network last night between 7:30 and 8 o'clock, and the remainder did not watch it; so the universe, as far as we are concerned in rating this program is split into only two parts, and this is no more complicated than any problem with regard to blood, water, grain, or anything else.

Senator MONRONEY. You mean it falls into a universal category?

Mr. CORDELL. For each program.

Senator MONRONEY. Similar to the ash content in coal—that so many people out of this 1,050 of the 43 million like horse opera, or like the $64,000 giveaways; so therefore you multiply that by your universe, and take the square root, and you get horse opera as the thing America wants to hear?

Mr. CORDELL. What we are trying to measure is as simple as these other things. It is only that you are going at them in the complex maze of all programs, the fact that it changes, and you want repetitive measurements.

Senator MONRONEY. If all three networks have horse opera from 7:30 to 8, the whole universe wants horse opera because that is all you can get; and chances are they will all parallel that program. So don't you multiply your error by having nothing else available because the index has shown that people prefer horse opera?

Mr. CORDELL. We are historians. If we reported watching an opera when there was no opera on the air, we would be called to task very quickly.

Senator MONRONEY. But if there is nothing else but horse opera on, you report that the world likes horse opera, and nothing else.

Mr. NIELSEN. We merely record what people viewed—not whether they liked it.

Senator MONRONEY. They had their television on, but they couldn't see anything else; all they could see is that or a dark screen.

Mr. CORDELL. We also record the number who didn't like it, and who didn't have this set on at that particular time.

Senator MONRONEY. Out of the 1,050?

Mr. CORDELL. Yes, sir.

Senator MONRONEY. You don't record how many turned it off, do you?

Mr. CORDELL. Yes.

Senator MONRONEY. But you don't know why; it just went off.

Mr. CORDELL. We don't know why.

Mr. COX. If they stayed for 6 minutes you record them as watching?

Mr. CORDELL. That is right, but we know what happened each minute during the program. We are not restricted to the 6-minute measurement.

Mr. RAHMEL. Let us assume there were two horse operas and a comedy show. If they sample two horse operas for 2 minutes each, and then take something else, we would know which they preferred. We will show you information of that type in a few moments.

Senator MONRONEY. But two pieces of grain don't jump out and say "I want comedy instead of horse opera." You have the human element coming in here, which certainly is different from this cold blooded statistical confirmation that the 43 million sets—we are all

advancing from a complete disqualified position on statistical matters. We are just representing—at least we hope we are—the television viewers who are wondering why they get these types of programs. I am not questioning the accuracy of the sample, or questioning the electronics; we are merely wondering, while maybe your duty is performed in recording history, whether somebody is not goofing very badly on the interpretation of the history.

Mr. NIELSEN. May I say, Senator, that is another aspect of the subject. All I am trying to demonstrate at the moment is the accuracy of our work. The other aspect is one I am coming to, and I think perhaps if you will defer this discussion until then it will be a little easier to handle.

Mr. Segall has just handed me a document dated June 23, 1958. The Society of Business Advisory Professions, Inc., has published two pamphlets in its series of "Current Business Study" Nos. 18 and 19, March 1954 and October 1954, entitled, respectively, "The Growing Role of Economic Data in Judicial and Administrative Proceedings," and "The Role of Sampling Data as Evidence in Judicial and Administrative Proceedings." Joel Dean, of Joel Dean Associates, and professor of business economics at Columbia University, has made the following statement:

> Even when it is believed that the census will provide more accurate information than a sample, a sample is often indicated. The census may cost many times as much as the sample, with only a negligible increase in the accuracy of the results. Under such circumstances sampling is clearly called for. Information about the degree of confidence which one can have in sampling estimates can be provided only by trained statisticians. The layman is often surprised to know that quite small samples can provide information about extremely large universes [groups] with only a negligible chance that errors beyond a specific magnitude will occur. For example, it is possible to estimate within 4 percent certain characteristics about the population of the United States with samples on the order of 2,000 and with only 1 chance in 100 of being wrong.

I think we might remind ourselves that the sampling done by the U.S. Government involves sampling of people or families.

Senator MONRONEY. Don't they go back every 10 years to be sure they are right? You have to have a home base on which you are doublechecking your sample with the actual statistical data—measuring a couple of people, and checking that. But you have such a way of orienting your data to the universality of the census.

Mr. NIELSEN. In the meantime, you are deciding the whole economic fate of the country, and perhaps its safety in world affairs, on the basis of trends occurring in employment and unemployment, both of which are determined by sampling processes.

Mr. Cox. The Bureau of the Census uses 40,000.

Mr. CORDELL. Those are for unemployment statistics, where you are getting down to selective situations. They would appraise their sampling with about the same methodology we use here, and they are wanting data for local areas and various other groups. Their sample size has to be long enough to reach the ground; and we design the sample sizes to meet the purposes for which they are going to be used.

Mr. Cox. In testing coal, milk, or these other items, a strictly random sample would be used. In other words, it would not make any difference whether you took the half pint from one end of the car, or from the middle, or from the other end.

Mr. CORDELL. They have procedures for randomizing, as we have to do in selecting the sample of 1,200 homes. Not just any 1,200 homes will do the job. It is only when you do it with scientific care that you can get the desired characteristics to come out.

Mr. COX. Are you going to explain how this has been done?

Mr. NIELSEN. We have explained that in a document furnished to the committee, and I will explain it further.

Senator MONRONEY. What is the tenure of the 1,050—how long a service do they render?

Mr. NIELSEN. Once having been installed, the Audimeter stays there until the family dies or the home is burned down by fire or destroyed by flood, or there is a divorce, or until the universe changes in some way which makes it necessary for us to change our sample. We are constantly making changes. If more homes appear in California, more Audimeters would be shifted to California. There is a shifting process which averages about 20 percent a year.

Mr. RAHMEL. The latest figure is 15 percent.

Senator MONRONEY. A turnover of 15 percent in your sample. In other words, you are examining the same group year after year?

Mr. NIELSEN. That is right.

Mr. COX. When did you first select this sample, which I presume would antedate television?

Mr. CORDELL. The sample was originally selected in 1947, and we have a perpetual problem of keeping it in tune with changes taking place since that time.

Mr. COX. Was it 1,200 for radio at that time?

Mr. CORDELL. It was a larger sample at that time, of which we subsampled 1,500 homes, in 1947. Since that time we did a subsampling down to the 1,200 level, which is the total sample for radio and television today.

Mr. COX. What percentage of the original sample is still included, if any?

Mr. CORDELL. That would be a difficult question to answer, because as we pointed out, it is turning over all the time, but, of course, there are many homes in existence today that were also in existence in 1947, and we would have preserved that particular fraction.

Mr. NIELSEN. We could get that figure for you, sir.

(This information was supplied as follows: The sample has less than 10 percent of the original homes.)

Senator MONRONEY. In this great statistical operation have you ever taken the IQ of the sample?

Mr. NIELSEN. We know the educational level of the people in the family.

Senator MONRONEY. Have you ever given an IQ test? You have a standard test you could get from the Army, and I think it would be highly indicative, if I were spending millions of dollars to put on a program, to know what the IQ is of only 1,050 people.

Mr. CORDELL. We assure ourselves it is a cross section of the total population. If somebody else wants to know the IQ of the total population, they will measure it themselves.

Senator MONRONEY. You have a broader sample of IQ's by taking the Army and other tests and establishing a pretty good level of the Nation's IQ; but has anybody established the level of the IQ of the 1,050?

Mr. NIELSEN. Nobody knows the IQ of the whole population. The Army is not a true sample. That is about the least representative sample you could get—one age group, one sex, good health, and certain other characteristics. That Army sample would be a very bad sample.

Mr. COX. Doesn't the economic status change after you select them? Doesn't the educational level change? Doesn't the constituency of the family group change?

Mr. CORDELL. Anything you can say happens to the total population is likely to happen to the subgroup.

Mr. COX. Suppose the family moves out, or are divorced. Do you have that family tabbed as being the representative, in your sample, not only of that geographic area, but of a certain educational level, and economic status, and occupation—so that when you seek to replace it you try to replace those characteristics?

Mr. CORDELL. You are describing quota sampling, where it was felt that by describing enough characteristics you would automatically get a reliable cross section. At the present time, our sample is actually constructed to be a cross section of dwelling units, and we then specify this particular dwelling unit at this particular location; and then if a family moves out of this dwelling and someone else moves in, we will sample the family moving in. Likewise, as new homes are constructed, we have to reach in and sample new dwelling units that are being established. We feel that in getting a cross section of dwelling units, we get a cross section of people moving in and out.

Mr. COX. Could you tell what percent live, say, east of the Mississippi River?

Mr. CORDELL. The percentages east of the Mississippi River would be whatever ratio the TV population is, excluding the mountain time zone which we do not measure because of its small importance to the total picture. The mountain time zone, representing 3 percent of the United States we exclude by definition, because it would pose a very peculiar problem of accounting for a special time zone with only a 3-percent segment of the total universe.

Senator MONRONEY. How about the South?

Mr. CORDELL. We measure the South.

Senator MONRONEY. On what percentage?

Mr. COX. Now, do you try to get these homes not only in general areas, but in specific communities; that is, in other words, would every community with 43,000 people have one sample home located there?

Mr. CORDELL. You could find a subgroup that would not, but with our method of sampling, we are exposing all of the homes, excluding the mountain time zone, to this chance of being included in the sample design.

Mr. Cox. How many of the homes are in New York City, or in the viewing area of the metropolitan area of New York?

Mr. Cordell. Whatever fraction that New York represents of the total TV population. I don't know the figure offhand.

Mr. Rahmel. I can give the figure, approximately.

Mr. Cordell. This is no particular problem, because there are good records of TV ownership, and what fraction New York represents of the total is easy to determine.

Mr. Rahmel. New York's television area has about 105 homes. Therefore, 105 out of our 1,050 is in the New York TV viewing area.

Mr. Nielsen. May I show you what the U.S. Census has done to try to answer the questions in your mind? We have had the Census Bureau do a terrific job to answer these questions, and if you will permit me to show the results, I believe you could proceed with greater effectiveness.

Many laymen find it difficult to believe that the mathematical formula I showed you is correct, that is, that in actual practice things would work out as well as would be indicated by the formula.

To settle this question for all time, we recently paid the U.S. Census Bureau to perform a unique experiment. The 1950 census had determined, by actual visits to about 46 million homes, what percentage of these homes had mechanical refrigeration, what percentage had hot-water heating, and so forth, and so forth, for a total of 44 different characteristics.

There are 44 things about a house—whether they have a gas stove, a refrigerator, and so forth—which the Census determined by calling on every 1 of the 46 million homes. For each 1 of these 44 characteristics, the Census Bureau drew a small sample (typically 400 to 750 homes) from the total of about 46 million. This was repeated 100 times. For example, for mechanical refrigeration, 100 different samples, each having 400 homes, were drawn.

Then in each of these 100 small samples, the Bureau counted the percentage of homes having mechanical refrigeration—and these figures, 100 of them, were compared with the true figure which had previously been derived from the complete housing census. Some typical results are shown in chart 9. Television ownership at that time was actually 10.9 percent. A sample of 400 homes shows an average error of plus-or-minus 1.16, and by the mathematical formula it should have been 1.24. That is rather close.

On mechanical refrigeration the average error was plus-or-minus 1.75, as against the formula-computed figure of 1.76. You can find no great difference for all these other characteristics, and if you average them, the small samples showed 1.39, compared to 1.43 for the mathematical calculation.

(Chart 9 is as follows:)

PROOF OF THE ACCURACY OF { (a) SMALL SAMPLES (b) SAMPLING FORMULA

(All work done by U.S. Census Bureau)

SUBJECT	THE TRUTH (1950 HOUSING CENSUS)	SAMPLE SIZE	AVG. ERROR (POINTS) (100 SAMPLES) FORMULA	AVG. ERROR (POINTS) (100 SAMPLES) ACTUAL
1. Television	10.9%	400	±1.24	±1.16
2. Mech. Refriqeration	73.3	400	1.76	1.75
3. Piped Steam or H.W.	21.5	453	1.54	1.47
4. Warm Air Heat	24.6	453	1.61	1.37
5 Owner Occupied	51.2	500	1.78	1.78
6. Renter Occupied	37.6	500	1.73	1.77
7. Two-Room Dwelling	7.4	750	0.76	0.63
8. Six-Room Dwelling	16.5	750	1.08	1.16
Averages			1.43	1.39

Senator MONRONEY. All of those are physical things. If you have got a mechanical refrigerator it is there, unless you stop paying for it, and then it would be gone. But I cannot conceive of the human variables being tabulated with the statistical system of accuracy over a small sample of listening homes.

Mr. NIELSEN. Wouldn't you say a person with mechanical refrigeration would have it as a result of judgment, just as well as listening to a television program?

Senator MONRONEY. I think refrigeration is a product that the public has learned to accept as a convenience, and they are not going to get rid of it. And your statistical thing there has little application to the intangible habits—based on a 1,050 sample—as to what Mr. and Mrs. John Q. Public are going to listen to, or desire.

Mr. NIELSEN. As of 8:30 p.m. on Tuesday, in all the television homes in the United States, there were only two conditions—either the thing is turned on or it is turned off. That is one thing we are measuring?

Second, in those that are turned on, to which of the channels are they tuned? That is just as much a physical condition as the existence of a television set or the existence of a stove or a piped air heating system.

Senator MONRONEY. For the 1,050; but there is no way of knowing what that guy is going to listen to on next Thursday.

Mr. NIELSEN. We don't predict what he is going to do.

Senator MONRONEY. The thing that interests this committee is the result of your interpretation and "speedometer" measurements on the 1,050.

Mr. NIELSEN. A few moments ago you said you were not questioning the accuracy; you were questioning the sociological and other effects.

Senator MONRONEY. And the predictability of listening habits for the future, on which our programing changes, resulting from——

Mr. NIELSEN. We don't predict.

Senator MONRONEY. You don't predict, but the people that take it from you have predicted, which is why you get the rash of giveaways of a certain kind; and then you get a rash of westerns, and then you get the who-dun-it series, and all that sort of thing.

Mr. NIELSEN. That is another aspect of the subject.

Senator MONRONEY. I don't blame you for the interpretation, but it seems the boys who make these determinations figure this is the Sermon on the Mount, and that whatever this thing shows people have listened to—on these 1,050 sets—is going to be the radio fare of the Nation.

Mr. NIELSEN. I think it is inevitable that our position is very much like that of the chaps who count the ballots in an election. They count the ballots as to what happened in yesterday's election. You can't prevent the politicians from using those figures to try to predict what is going to happen in the next election.

Senator MONRONEY. Do you poll the 1,050 people and tell us who is going to be the President of the United States?

Mr. NIELSEN. No; Dr. Gallup has found that is difficult. People won't always tell you—accurately—what they are going to do next week.

Senator MONRONEY. What they are going to vote for—for President, or a television program. In the net result of these statistics, you get that projection, no matter how accurate your sampling might be.

Mr. NIELSEN. That is not our function; our function is not to predict. Our function is to measure what people have viewed.

Now, the other is another subject, and we will come to that in a moment, if you will permit me to proceed.

Senator MONRONEY. All right, sir.

Mr. NIELSEN. The more detailed results of this study, together with an explanatory letter from the Bureau of the Census, are incorporated as exhibit A in this statement.

(Exhibit A is as follows:)

EXHIBIT A

The next three pages demonstrate: (1) The validity of the probable error formula. (2) The ability of small samples (when selected by scientific methods, meticulously executed) to reflect accurately the behavior of very large groups.

The 8 cases shown are typical of the entire group of 44 cases (involving 4,400 different samples) tabulated by the U.S. Census Bureau.

OFFICE OF THE DIRECTOR

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON 25

IN REPLY REFER TO:

October 28, 1954

Mr. A. C. Nielsen, President
A. C. Nielsen Company
2101 Howard Street
Chicago 45, Illinois

Dear Mr. Nielsen:

You have our permission to publish in your brochure "TV Audience Research for the United Kingdom" the results of the special small sample tabulations which we supplied you. These tabulations were for 100 separate samples drawn from our regular 1950 Census of Housing returns. Each of these 100 samples were of specified size, which varied for the different housing characteristics.

These samples were drawn using sampling methods that assure each of the 45,983,398 dwelling units of the total population an equal chance of being selected. Thus, they are probability samples. Your study based on the samples we have provided illustrates clearly the fact that:

(1) relatively small samples, if properly selected, can provide estimates of measurable precision;

(2) it is possible to predict how estimates from such samples will be distributed in relation to the value that would be obtained from a complete census taken by comparable procedures. Moreover, this is possible even though each sample may represent a very small fraction of the total population.

The substantial agreement found between observed and expected distributions of sample estimates is in accordance with similar studies we have made with probability samples.

Your study should constitute a practical demonstration of the fact that relatively small probability samples can provide useful results. Such illustrative studies may help create better understanding of sampling on the part of users of survey results, some of whom, based on intuition, might be erroneously inclined to reject samples solely because they represent only a small fraction of the total population.

Sincerely,

Morris H. Hansen
Assistant Director for Statistical Standards
Bureau of the Census

PAGE 2 OF EXHIBIT "A"

ILLUSTRATION OF CLOSENESS BETWEEN ACTUAL AND PREDICTED ACCURACY OF SMALL NATIONAL SAMPLES

TELEVISION RECEIVERS
Size of each sample: 400 homes
Number of measurements: 100
(each based on a 400-home sample)

CORRECT ANSWER: 10.9%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
14.0 to 16.0	+3.1 to +5.1	2	2
12.0 to 14.0	+1.1 to +3.1	15	21
10.0 to 12.0	−0.9 to +1.1	49	50
8.0 to 10.0	−2.9 to −0.9	32	24
6.0 to 8.0	−4.9 to −2.9	2	3
	Totals	100	100
Probable Error (in percentage points)		±0.99	±1.03
Average Error (in percentage points)		±1.16	±1.24

MECHANICAL REFRIGERATION
Size of each sample: 400 homes
Number of measurements: 100
(each based on a 400-home sample)

CORRECT ANSWER: 73.3%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
78.0 to 80.0	+4.7 to +6.7	2	1
76.0 to 78.0	+2.7 to +4.7	17	9
74.0 to 76.0	+0.7 to +2.7	34	27
72.0 to 74.0	−1.3 to +0.7	27	36
70.0 to 72.0	−3.3 to −1.3	14	21
68.0 to 70.0	−5.3 to −3.3	5	5
66.0 to 68.0	−7.3 to −5.3	1	1
	Totals	100	100
Probable Error (in percentage points)		±1.48	±1.49
Average Error (in percentage points)		±1.75	±1.76

PIPED STEAM OR HOT WATER HEATING
Size of each sample: 453 homes
Number of measurements: 100
(each based on a 453-home sample)

CORRECT ANSWER: 21.5%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
26.5 to 28.3	+5.0 to +6.8	0	1
24.7 to 26.5	+3.2 to +5.0	2	3
23.0 to 24.7	+1.5 to +3.2	23	17
21.2 to 23.0	−0.3 to +1.5	38	35
19.4 to 21.2	−2.1 to −0.3	30	31
17.7 to 19.4	−3.8 to −2.1	7	12
15.9 to 17.7	−5.6 to −3.8	0	1
	Totals	100	100
Probable Error (in percentage points)		±1.24	±1.30
Average Error (in percentage points)		±1.47	±1.54

WARM AIR FURNACE HEATING
Size of each sample: 453 homes
Number of measurements: 100
(each based on a 453-home sample)

CORRECT ANSWER: 24.6%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
28.3 to 30.0	+3.7 to +5.4	2	3
26.5 to 28.3	+1.9 to +3.7	9	13
24.7 to 26.5	+0.1 to +1.9	23	32
23.0 to 24.7	−1.6 to +0.1	40	31
21.2 to 23.0	−3.4 to −1.6	23	17
19.4 to 21.2	−5.2 to −3.4	3	3
17.7 to 19.4	−6.9 to −5.2	0	1
	Totals	100	100
Probable Error (in percentage points)		±1.16	±1.36
Average Error (in percentage points)		±1.37	±1.61

[1]Based on standard statistical formulae.

[2]The difference between the "Actual" and "Predicted" answers are not great—and they would, of course, be less if the number of measurements (100 in above cases) were increased. Averages for the eight cases shown on pages 108 and 109 are substantially identical:

Probable Error, predicted per formula..... ±1.215%
Probable Error, actual..... ±1.175%

PAGE 1 OF EXHIBIT "A"

ILLUSTRATION OF CLOSENESS BETWEEN ACTUAL AND PREDICTED ACCURACY OF SMALL NATIONAL SAMPLES

OWNER-OCCUPIED DWELLINGS
Size of each sample: 500 homes
Number of measurements: 100
(each based on a 500-home sample)
CORRECT ANSWER: 31.2%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
56.4 to 57.6	+5.2 to +6.4	0	1
55.2 to 56.4	+4.0 to +5.2	2	3
54.0 to 55.2	+2.8 to +4.0	8	6
52.8 to 54.0	+1.6 to +2.8	10	14
51.6 to 52.8	+0.4 to +1.6	22	19
50.4 to 51.6	−0.8 to +0.4	21	21
49.2 to 50.4	−2.0 to −0.8	16	18
48.0 to 49.2	−3.2 to −2.0	15	11
46.8 to 48.0	−4.4 to −3.2	3	4
45.6 to 46.8	−5.6 to −4.4	3	2
44.4 to 45.6	−6.8 to −5.6	0	1
	Totals	100	100
Probable Error (in percentage points)		±1.51	±1.51
Average Error (in percentage points)		±1.78	±1.78

RENTER-OCCUPIED DWELLINGS
Size of each sample: 500 homes
Number of measurements: 100
(each based on a 500-home sample)
CORRECT ANSWER: 37.6%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
42.0 to 43.2	+4.4 to +5.6	4	2
40.8 to 42.0	+3.2 to +4.4	3	5
39.6 to 40.8	+2.0 to +3.2	11	11
38.4 to 39.6	+0.8 to +2.0	14	18
37.2 to 38.4	−0.4 to +0.8	25	22
36.0 to 37.2	−1.6 to −0.4	15	19
34.8 to 36.0	−2.8 to −1.6	17	13
33.6 to 34.8	−4.0 to −2.8	6	7
32.4 to 33.6	−5.2 to −4.0	4	2
31.2 to 32.4	−6.4 to −5.2	1	1
	Totals	100	100
Probable Error (in percentage points)		±1.50	±1.46
Average Error (in percentage points)		±1.77	±1.73

HOMES WITH 2 ROOMS
Size of each sample: 750 homes
Number of measurements: 100
(each based on a 750-home sample)
CORRECT ANSWER: 7.4%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
9.6 to 10.4	+2.2 to +3.0	0	1
8.8 to 9.6	+1.4 to +2.2	3	6
8.0 to 8.8	+0.6 to +1.4	16	19
7.2 to 8.0	−0.2 to +0.6	46	32
6.4 to 7.2	−1.0 to −0.2	30	27
5.6 to 6.4	−1.8 to −1.0	4	12
4.8 to 5.6	−2.6 to −1.8	1	3
	Totals	100	100
Probable Error (in percentage points)		±0.54	±0.64
Average Error (in percentage points)		±0.63	±0.76

HOMES WITH 6 ROOMS
Size of each sample: 750 homes
Number of measurements: 100
(each based on a 750-home sample)
CORRECT ANSWER: 16.5%
(from U.S. Census of 45,983,398 homes)

Range of Answers (Percent)	Difference from Actual Percent	Answers[2]	
		Actual	Predicted[1]
19.2 to 20.0	+2.7 to +3.5	3	2
18.4 to 19.2	+1.9 to +2.7	2	6
17.6 to 18.4	+1.1 to +1.9	16	13
16.8 to 17.6	+0.3 to +1.1	25	20
16.0 to 16.8	−0.5 to +0.3	16	23
15.2 to 16.0	−1.3 to −0.5	20	19
14.4 to 15.2	−2.1 to −1.3	10	11
13.6 to 14.4	−2.9 to −2.1	6	4
12.8 to 13.6	−3.7 to −2.9	2	2
	Totals	100	100
Probable Error (in percentage points)		±0.98	±0.91
Average Error (in percentage points)		±1.16	±1.08

[1]Based on standard statistical formulae.

[2]The difference between the "Actual" and "Predicted" answers are not great—and they would, of course, be less if the number of measurements (100 in above cases) were increased. Averages for the eight cases shown on pages 108 and 109 are substantially identical:

Probable Error, predicted per formula..... ±1.215%
Probable Error, actual..... ±1.175%

PAGE 4 OF EXHIBIT "A"

Mr. NIELSEN. These things do work out in actual practice, as stated by this formula. We have done all kinds of experiments—with marbles, for example—and there is no question about the reliability of the formula.

In all of this discussion of sample size, let us not overlook the fact that skillful selection of the sample is fully as important as size. Here the meter technique has a most important advantage, because it is the only technique with which it is practicable to use a fixed sample; therefore, we can afford to select the homes with utmost care and without stinting on the expense. An expenditure of several hundred thousand dollars is involved in selecting a thousand homes. It is not an easy thing.

Mr. COX. But once you made that selection—if there is any error, bias, misproportion of one taste over another in the sample you selected—doesn't the fact that it is a fixed sample perpetuate the bias; whereas if you make even a random scientific sample on a constantly changing basis, you will have some corrective to that by the mere fact you reach so many more people for purposes of overall evaluation?

Mr. CORDELL. As an answer to that question, I would like to refer you to what the Senator said about the fact that these are people, and they do change, so that a particular rating that may exist at one time in the same fixed sample will alter, as we find all the time, in the next week, or the next season. This is not fixed to give you a certain relationship. These program selections change from week to week, so that you cannot feel that there is any fixed pattern, and our history of measurement shows that we reflect the surges of popularity of the giveaway programs, they decline, and various other changes take place in popular tastes. It isn't rigid or fixed at all in this respect.

Mr. COX. But you have no way of correcting, or perhaps even detecting, that in a sample which you have selected, based on a distribution of population density to get homes in representative areas, of representative types, whether in getting a person of a certain family size and a certain educational background, and a certain occupation, you may also have gotten a person who, unbeknownst to you, has particularly strong feelings on one subject or another. And having once gotten him in there, is there any device by which you can check his particular responses and determine that he is not representative, statistically, as you had hoped, and therefore you can eliminate him?

Mr. CORDELL. The chances of our getting any group only exists in a small degree, as has been indicated, because if this is some subgroup, such as 10 percent, we will measure that within the same sampling variances as indicated by the formula, plus the normal turnover which would obviously subject him to being removed in about the same fraction.

There is another fact which is quite important. The fact that these people's activities do vary across time. They are not fixed and constant. We have measurements which show that over a period of time a program that might have a 30-percent rating per broadcast reaches as many as 70 percent of the total homes, which shows in itself that this is a changing audience.

We do get other auxiliary measurements which indicate that this sample is reflecting phenomena that are occurring. For example, our

sample, as you called attention to, was created before TV came into existence, and we have been reporting the acquisition of TV sets from our sample of 1,200 homes; and it has been paralleled and confirmed by the results of the Census Bureau's unemployment surveys, where they also collected information on television ownership, which shows that 80 percent of the population have TV sets—which corresponds to our figures. We are reconfirming our sample at various stages all the time.

Senator MONRONEY. Is it classified as to the towns and areas where these homes are located, or can you furnish the committee with an idea? You said 105 in New York City. I wondered how many in Oklahoma City, my hometown, and how many in Washington, D.C.

Mr. CORDELL. We could not provide the exact location, because obviously we would not want anyone to know the exact location of these homes.

Mr. COX. We are asking the number in a community.

Mr. CORDELL. We can divulge the fact we audit 178 certain counties, which represent 55 percent of the total population, because you would have to sample those at normal rates, but when we come in and draw a sample within a subsection of a group of counties, we do not want to reveal the exact location of that county, for obvious reasons.

Senator MONRONEY. On the location of the Audimeter, I presume if you have 105 in New York you probably have 75 in Chicago, or maybe something in the neighborhood of 50 or 60 in Los Angeles?

Mr. CORDELL. Would it answer the question if we provided you with a split of the sample by States, so we show that the proportion by States is proper in terms of the total United States?

(This information was supplied by letter dated Jan. 29, 1959, and is as follows:)

A. C. NIELSEN CO.,
Chicago, Ill., January 29, 1959.

Mr. NICHOLAS ZAPPLE,
Communications Counsel, Committee on Interstate and Foreign Commerce, Senate Office Building, Washington, D.C.

DEAR NICK: In accordance with your recent phone call, trust the following will provide the information you seek:

1. State-by-State distribution of the NTI sample is attached.
2. The sample has less than 10 percent of the original homes.
3. Up-to-date client list is also attached.

Am forwarding under separate cover the New York television reports for the 12-month interval commencing with the October report.

With best wishes.

Cordially,

HENRY RAHMEL.

NTI sample versus all TV homes by State (March 1958 figures)

	All TV homes (March 1958)	NTI sample as of July 1, 1958	ACN territory	Census region
Total, United States	*Percent* 100.0	*Percent* 100.0		
Alabama	1.4	1.3	Southern	ESC
Arizona	.6	[1] 0.	Pacific	MNT
Arkansas	.8	.9	Southern	WSC
California	9.8	[2] 11.1	Pacific	PAC
Colorado	.9	[1] 0.	West coast	MNT
Connecticut	1.5	1.5	Northeastern	NE
Delaware	.3	.3	Noatheastern	SA
District of Columbia	.5	.3	Northeastern	SA
Florida	2.2	2.3	Southern	SA
Georgia	1.8	1.4	Southern	SA
Idaho	.3	[1] 0.	Pacific	MNT
Illinois	6.3	6.9	West coast	ENC
Indiana	2.9	2.9	West coast and east coast.	ENC
Iowa	1.7	1.8	West coast	WNC
Kansas	1.3	1.0	West coast	WNC
Kentucky	1.4	1.3	East coast	ESC
Louisiana	1.5	1.4	Southern	WSC
Maine	.5	.5	Northeastern	NE
Maryland	1.7	1.4	Northeastern	SA
Massachusetts	3.1	3.4	Northeastern	NE
Michigan	4.8	4.8	Northeastern	ENC
Minnesota	1.9	1.9	West coast	WNC
Mississippi	.7	.8	Southern	ESC
Missouri	2.7	2.6	West coast	WNC
Montana	.3	[1] 0.	West coast	MNT
Nebraska	.8	.7	West coast	WNC
Nevada	.1	[1] 0.	Pacific	MNT
New Hampshire	.3	.3	Northeastern	NE
New Jersey	3.7	3.7	Northeastern	MA
New Mexico	.4	[1] 0.	Southern	MNT
New York	10.8	11.1	Northeastern	MA
North Carolina	1.9	1.7	Southern	SA
North Dakota	.3	.4	West coast	WNC
Ohio	6.0	6.0	East coast	ENC
Oklahoma	1.2	1.7	Southern	WSC
Oregon	1.0	[2] 1.3	Pacific	PAC
Pennsylvania	6.9	7.0	Northeastern and east coast.	MA
Rhode Island	.5	.4	Northeastern	NE
South Carolina	1.0	1.0	Southern	SA
South Dakota	.3	.4	West coast	WNC
Tennessee	1.6	2.1	Southern	ESC
Texas	4.8	4.7	Southern	WSC
Utah	.5	[1] 0.	Pacific	MNT
Vermont	.2	0.	Northeastern	NE
Virginia	1.8	1.7	Southern and northeastern.	SA
Washington	1.7	[2] 2.4	Pacific	PAC
West Virginia	.9	1.1	East coast	SA
Wisconsin	2.3	2.5	West coast	ENC
Wyoming	.1	[1] 0	West coast	MNT

[1] Mountain time zone States excluded as matter of policy and economics.
[2] Includes pro rata portion of homes that would be sampled in mountain time zone if we sampled mountain time zone.

Summary

	All TV homes (March 1958)	NTI sample as of July 1, 1958
Census region:	*Percent*	*Percent*
Total, United States	100.0	100.0
New England	6.1	6.1
Middle Atlantic	21.4	21.8
East North Central	22.3	23.1
West North Central	9.0	8.8
South Atlantic	12.1	11.2
East South Central	5.1	5.5
West South Central	8.3	8.7
Mountain	3.2	[1] 0
Pacific	12.5	[2] 14.8
NTI territory:		
Northeast	28.1	27.9
East Central	17.9	18.0
West Central	19.2	[1] 18.5
South	20.8	[1] 20.8
Pacific	14.0	[2] 14.8

[1] Mountain time zone States excluded as matter of policy and economics.
[2] Included prorata portion of homes that would be sampled in mountain time zone if we sampled mountain time zone.

Senator MONRONEY. Or regional, so we can tell what the spread is; because it seems to me that regional habits would vary considerably from the New York habits.

Mr. CORDELL. Our sample is distributed according to the total TV population, and we are keeping it up to date. It is no happenstance that it agrees; it is there by intention.

Mr. COX. Do you have instances where it becomes publicly known that an Audimeter is in a particular home, and it has to be removed by virtue of that?

Mr. CORDELL. We do not divulge it if we can help it.

Mr. RAHMEL. If that were to occur we would have to replace the home.

Mr. COX. Are these people sworn to secrecy?

Mr. RAHMEL. We have a written arrangement with them, sir, which while it doesn't swear them to secrecy, protects them on certain matters and protects us as well.

Mr. COX. In other words, they cannot be sued by someone who feels he has been forced off the air by their rating?

Mr. RAHMEL. People can sue anyone under any circumstances.

Senator MONRONEY. Is there any attention paid to the number of children that these 1,050 have?

Mr. RAHMEL. Not in recruiting the homes. The number of children balance out across the country as part of the sampling process.

Mr. NIELSEN. We pay no attention to the number of children in selecting the homes, but having selected them, we ascertain the number of children and check it against the census; and it always comes out within the small margins of error that you have seen here.

Now, I think it would be very convincing to you as to reliability of the sample—and perhaps answer the question you apparently have in mind—if we were to select another sample of a thousand in just the same way and put Audimeters there and get the figures from them, and then another sample of 1,000, and so on, so you will see the consistency of the ratings from the various groups. Since that isn't economically practical, we can do the same thing in the reverse. We

can take the sample of 1,000 and split it into 2 groups of 500 each, which we have done, or split it in quarters, which we have also done, and we find the differences among these groups are exactly as set forth in the mathematical formula.

The details regarding the technique we employ for the section of sample homes were furnished to your committee with our letter of April 30, 1957; however, if you want some of these details today, I am sure Mr. Cordell can supply them for your. Perhaps it will suffice, for your present purposes, to say that we use area probability methods and principles similar to those employed by the U.S. Bureau of the Census, and that the homes are dispersed according to population density and include various urban-rural and socioeconomic groups in their proper proportions.

The final step to ensure accuracy involves the use of the finest and most reliable electronic computing and printing equipment, operated in accordance with soundly developed procedures and manned by some of the best IBM operators in this country.

Let me summarize the factors which insure high accuracy for Nielsen Television Index Service.

1. Audimeters produce accurate basis data. (Any defective records are automatically rejected.)
2. Sample is representative.
3. Sample is adequate in size.
4. Data processing is accurate.
   (*a*) The best equipment.
   (*b*) Sound procedures.
   (*c*) Expert operators.

The major characteristics of Nielsen Television Index Service—characteristics which were pioneered by my company and which are still exclusive advantages of our service—are as follows:

1. Basic data free from human error.
2. Sampling on a true national basis. (Subject to omission of mountain time zone—only 3 percent of U.S. TV homes.)
3. A fixed sample:
   (*a*) Permitting highly accurate sample selection.
   (*b*) Ensuring trends of maximum accuracy.
   (*c*) Measuring cumulative audience.
4. Diagnostic information, e.g.:
   (*a*) Minute-by-minute audience.
   (*b*) Audience flow.
   (*c*) Audience by market divisions.
5. Measuring 4 weeks each month.
6. "Client service," for sound interpretation and maximum results.

Let us now consider the third basic question about TV audience research, viz, its effect on the entertainment profession and on the public.

As you know, it has been alleged that TV ratings result in the elimination of the less popular programs. Understandably, this result is unpalatable to people of two general categories:

(*a*) Those who have a pecuniary interest in such programs; for example, entertainers, producers, directors, networks, and advertising agencies.

(*b*) Those who feel that it is unfair or unwise to deprive the public of an opportunity to view certain programs which, while not popular with the public as a whole, do have a special appeal to certain groups. Furthermore, the thought is often expressed that some of these programs would serve to elevate the taste of the general public and therefore deserve to remain on the air.

Some critics also allege that TV ratings are not accurate and, therefore, that any actions based on such information are basically unsound and unfair.

In view of the proof I have already furnished in respect to the accuracy of Nielsen TV ratings, I see no need to offer a defense against the allegation of inaccuracy. It should be recognized that such allegations almost invariably come from persons who lack a real understanding of the statistical, engineering, and research principles involved. They are in no position whatever to make valid criticisms in respect to accuracy.

The understandable habit of challenging the accuracy of audience research whenever the findings are contrary to one's self-interest, or to a personal opinion, originated in the early days of radio, when research techniques did leave much to be desired in respect to accuracy.

And for reasons for self-interest, the habit has persisted, despite the fact that a highly accurate technique has been measuring national network radio for over 10 years and national network television for over 7 years.

The early measurements of radio were done by telephone, and at that time only about 42 percent of American homes had telephones. Also measurements were confined to large cities, and when you put the two limitations together, the samples were being drawn from a segment of the population, urban and telephone, totaling only 17 percent, or about one-sixth of the total, and very nonrepresentative. As a result, the ratings were certainly not a true measure of each program's audience, and therefore were challengable—and were challenged.

It seems safe to predict that criticisms of this type will always be with us. We can, and we do, sympathize deeply with entertainers, producers, and others who invest their artistic efforts or their money in television programs, only to find that the public as a whole does not appreciate their efforts. However, we must not allow our sympathy to obscure the fact that Nielsen TV ratings are reliable measurements of audience size.

Furthermore, we must never overlook the fundamental fact that it is not the TV ratings that are responsible for the cancellation of a program, but, rather, the business policy (generally of the network or sponsor) of seeking programs which will reach audiences of maximum size and, therefore, enable the advertiser to deliver his sales messages at the lowest possible cost per thousand families or persons reached.

When a Broadway theater production closes after a short and unsuccessful run, its unfortunate fate should not be attributed to the accountant who tallied the box-office recepits but, rather, to the basic fact that the production lacked sufficient public appeal to justify its continuance. Blaming TV ratings for the elimination of a program is as illogical and unjustified as it would be to blame the accountant

for the closing of the unpopular Broadway show. This is a very important point of view which is too commonly overlooked.

Whether it is fair and proper for TV programs to live or die on the basis of their public appeal, or whether the TV entertainment given to the public should be decided by persons claiming to be expert in matters of taste, is, to some extent, a question for the sociologists—and I lay no claim to expertness in that field.

However, it would seem appropriate to point out that we are living in a democracy, and most Americans probably feel that it is desirable to allow every individual the maximum possible freedom of choice. The people in this country not only choose their elected officials, but they also decide which restaurants will prosper, which books will sell, which stage plays will succeed, and what kinds of motion pictures will be made. The public even decides, by the votes it casts in response to the research work of publishers, what kinds of magazine articles will be available.

In view of these facts, it really should not be surprising that television entertainment, exactly like other forms of entertainment, such as books, movies, and the theater, succeeds or fails in proportion to how well it pleases the public.

As I have said, some sociological questions appear to be involved in deciding whether the interests of the public would ultimately be served better if television entertainment were selected by experts, rather than by the public itself, but if the selection were made by experts, television would certainly be in a class radically different from that of all the other forms of entertainment, each of which has always recognized the necessity of pleasing the public.

Senator MONRONEY. May I interrupt there? Don't you think that television is a little bit more monopolized than the Broadway shows, books, or magazines? You get your choice of three kinds of television—and you may be able to find an educational station that you can tune in. But if everyone follows the leader, and the $64,000 giveaway is getting a good rating, then the other two networks jump on that and try to parallel it; so you get an oversimplification and overimitation, whereas the thing on which the entertainment field has survived is variety.

But this adherence to the rating system tends to reduce variety because of the habit of Madison Avenue not to generate any ideas—or trust their judgment as theater producers do on "My Fair Lady," or something of that kind—but to imitate that which has gone before. The more of this imitation that goes on, the more the monopolization of the television screen favors certain categories of entertainment—and therefore the higher the ratings go on that type program, because that is all you can look at at the time.

Mr. NIELSEN. The first question is whether this constitutes monopoly, and I am sure the question of whether any practice constitutes monopoly is very complicated even for the wisest judges and courts in the land, and I certainly would not pass judgment on such a question.

Senator MONRONEY. I am not accusing you, I am saying that it results, with only 3—you don't have the widespread force of 100 or 200 people competing, you have 3 networks; and they all seem to love to follow, sheeplike, on whatever the leader develops that is proven to have a good Nielsen rating.

Mr. NIELSEN. It is like the automobile industry, where there are three major producers, and a couple of minor ones. We have three networks.

Senator MONRONEY. But we can't get foreign programs.

Mr. COX. And we can buy foreign cars.

Mr. NIELSEN. I think this is pertinent to the second part of your question. I think there may be a tendency on the part of some people to assume that programs are more stereotyped than they are. Here are the different classifications we found it necessary to make: Western children's, other children's, general drama, suspense, situation comedy, western drama, adventure, variety shows, quiz and audience participation, serials, quiz and audience participation daytime, and so on, and of course these are 15-minute, 30-, 60-, and 90-minute programs. The best brains in the country are trying always to figure out something new and different, and of course the ratings tell whether they succeed or not, and many of them do succeed. You have types of programs today which were not in existence or known 5 years ago.

I am here not to defend programing; I am not an expert on that subject. But I have pointed out that other forms of entertainment find it necessary to please the public.

Mr. COX. That does not deprive the man who wants something recondite from buying a small-circulation magazine which would provide this; but because of the limitation on television facilities which Senator Monroney has referred to, once this choice is made with respect to the three networks, that takes care of it. And if his taste is not taken care of in what they choose to offer to meet the majority selection, it is not taken care of at all?

Mr. NIELSEN. I think I should point out that you seem to be overlooking the sustainer programs and the educational stations, which do give the public some choice for their minority likes and dislikes.

Mr. COX. On Sunday afternoon.

Mr. NIELSEN. Not always at the time you would like them.

While it is easy to criticize the presently used democratic system which, in effect, lets the public make its own decisions as to what kinds of TV entertainment it receives, it would be shortsighted to abandon the present system without first giving very serious consideration to certain practical consequences. In all these matters it is easy to see the undesirable features of things that are being done, but I think it is only appropriate to consider what would happen if you tried alternatives.

First of all, unless TV programs are designed to attract audiences of maximum size, the cost of delivering the advertiser's commercial messages, in terms of cost per thousand persons or families reached, will increase. Sponsers and networks can scarcely be blamed for taking this important fact into account in deciding the fate of programs, because television advertising must compete with other mediums, and any material increase in the cost per thousand would inevitably cause a decrease in television revenues. And since this would reduce the funds available for financing TV programs, it is obvious that the public would suffer. It takes money to produce good programs. The less money they have, the less they can do in experimenting with new programs.

Mr. COX. This is the basis upon which some people have suggested that a subscription device, permitting direct support of chosen pro-

gram types not conforming to the majority taste, would be the only way in which the minority interests in the population can get the kind of programing they want on television?

Mr. NIELSEN. I have been in Europe during most of the time the controversy on pay television has been going on, so I wouldn't want to take a position on that.

Senator MONRONEY. Do you think there is any responsibility on any of the three great networks—who control 90 percent of the air time, I am sure—to consider that art, culture, or the upgrading of the type of programs is at least a segment of their duty—in return for the great privilege they enjoy in this airspace in which they are franchised to operate?

Mr. NIELSEN. That is not a question I can answer. But they do put on sustainers.

Senator MONRONEY. Sunday afternoon is filled with them, and they all duplicate the general pattern.

Mr. NIELSEN. I don't own any stock in networks.

Senator MONRONEY. You just furnish the scorecard on your 1050.

Mr. NIELSEN. That is right, I just count the votes.

Now, perhaps a comment should be made about the more radical critics who actually take the position that TV ratings should be abolished, that is, if there were no system whatever for measuring the public tastes, programs would not be thrown off the air.

It seems to me that this is a very naive point of view. First, it overlooks the fact that if there were no real yardsticks, advertisers, agencies, and networks would merely substitute guesswork for facts. Programs would still have to stand or fall on the basis of their public appeal—but inevitably there would be a great deal of injustice, because nobody can make accurate guesses as to the audience reached by a program. Therefore, elimination of TV ratings would not solve the problem at all.

Senator MONRONEY. I agree with you that ratings should form one of the major concerns; but certainly it would seem to me that some charitable foundation could do very well to buy a little radio or television time—I am sure they would have to buy it—to invite the listeners to write the president of the company, box so and so, New York City, and tell him just what they thought of the program.

Mr. RAHMEL. The Ford Foundation has put some money into that sort of effort. I don't know the details, but I assume the networks do.

Mr. BOESEL. It sponsored "Omnibus" until it got on its own feet.

Senator MONRONEY. They are supporting that "Mike Wallace Interview" now; but what I am talking about is buying some chain-break time to invite the audiences just listening during the evening to write the president of the company to tell him whether they like, or don't like, the program.

Mr. NIELSEN. The networks know what the public likes, as a whole. We can take all the college-educated homes and show what they like. They can take those interested in art, expert fishermen or huntsmen, and show what they like. These facts are known to the networks.

Senator MONRONEY. From the 1,050?

Mr. NIELSEN. That can be ascertained easily. The problem is economic, whether they can support programs appealing to these small groups; and that is a question on which I don't take a position.

Senator MONRONEY. That all comes out of the original sample of 1,050—whatever you break it down to, it comes out of that total; and you have a college education in perhaps 400 of them.

Mr. NIELSEN. If you are merely trying to determine program taste—e.g., do college people listen to westerns—your sample is accurate enough, because there are many different western programs and you can average them up.

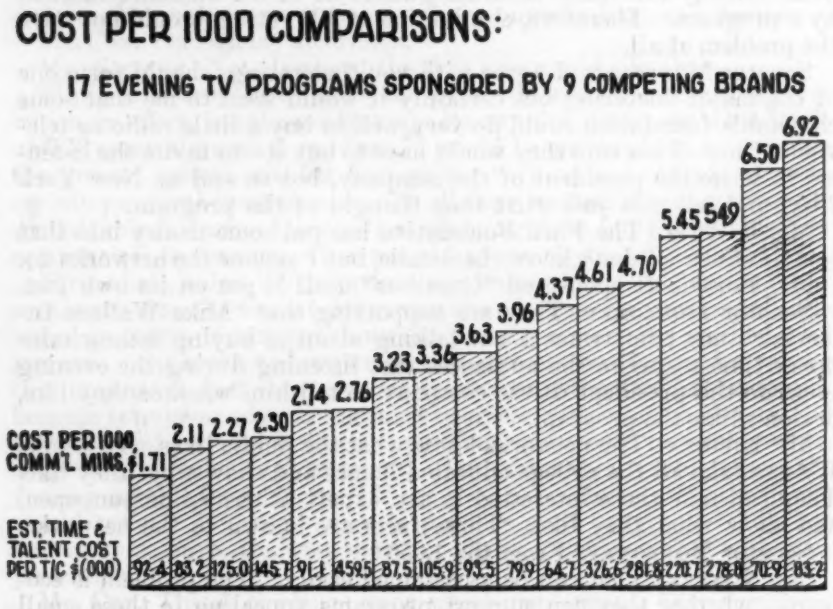
Mr. Cox. Wouldn't an alternative to simple measurement of the audience, an effort to determine how many people are watching—if this were not available, wouldn't they be forced to a measurement, of the final result; namely, the impact on purchases, which, I take it, is something you measure in these food and related fields?

Mr. NIELSEN. I am going to come to that in a moment. Of course, I am much interested in that because we are the people who do measure the sales results.

The elimination of audience research would confront the advertiser with the problem of spending millions of dollars on the basis of pure guesswork, and this would have serious consequences. It is generally conceded that the success of television, as an advertising medium, has been due in part to its ability, through sound research, to give the advertiser unusually accurate and detailed facts as to what he is getting for his money.

Advertisers are well aware of the fact that television, while certainly very profitable on the average, is speculative in the sense that there are often wide differences between the results, in terms of cost per thousand families, enjoyed by competing advertisers. Chart 10 reveals this fact quite clearly.

(The chart is as follows:)



Mr. NIELSEN. Here are the costs per thousand for 17 evenings TV programs sponsored by 9 competing brands. Here are companies all competing with one another. The most fortunate one is paying only $1.71 per thousand homes; the least successful is paying $6.92; and the others are all in between.

Differences of the magnitude shown in this chart are very disturbing to an advertiser. He can scarcely feel comfortable while paying for advertising or any other commodity four times as much as a competitor pays. Imagine how Chrysler would feel if they found they were paying four times as much for sheet steel as Ford were paying; it would be an impossible situation. These are very serious facts. And every advertiser knows that if such wide differences can exist despite the aid of excellent research the differences which would exist if no research were available would be very great; hence, there would be a serious reduction in the number of advertisers who would feel justified in risking their money on television as an advertising medium.

From the standpoint of the public, this would be unfortunate because, with less money available for programing, the TV entertainment available to the public would be less satisfactory.

Undoubtedly we have, in this country, some persons who would prefer to solve the whole problem by using Government money to defray the cost of programing. This is the system used in many foreign countries and, until October 1955, in Great Britain. Having spent nearly half my time in Europe during the past 4 years, I feel justified in expressing the opinion that the American public would not like such a system.

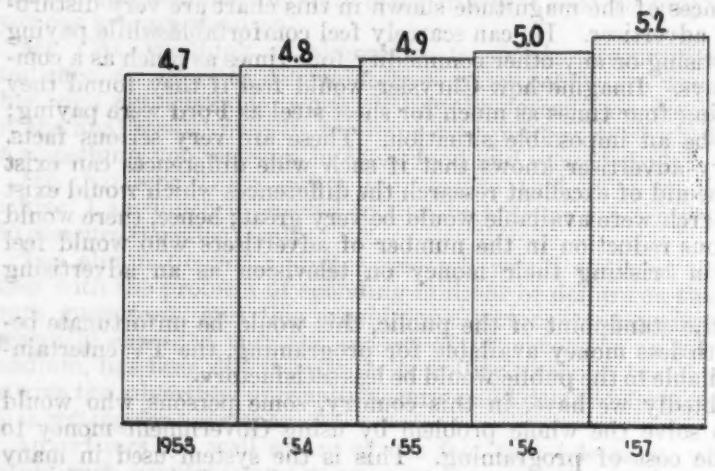
First of all, they would resent being taxed for the privilege of owning a TV set, or being taxed for a kind of entertainment which, in our country, has always been free. This is not like pay TV. In England you have to pay so much a year for every TV set.

Secondly, they would object to having some Government official decide what programs would be good for them. They are accustomed to having a voice in such matters.

The question of who pleases the public best has been answered in Great Britain, where Nielson Service shows that in homes which have a choice between the Government-operated, noncommercial service and the commercial service, the latter now get about 70 percent of the total viewing—or about 2⅓ times the amount obtained by the noncommercial service.

Chart 11 suggests that the system now used in America is delivering tremendous quantities of acceptable entertainment to American families, and that the trend is favorable.

(The chart referred to is as follows:)



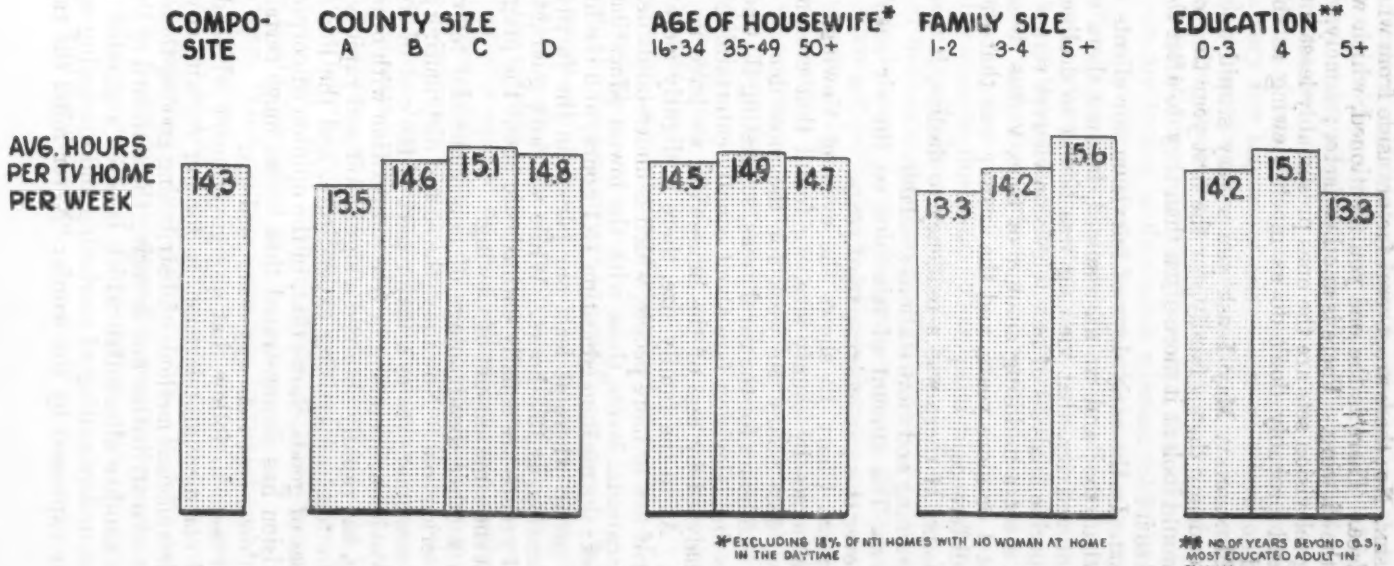
Mr. NIELSEN. And chart 12 suggests that, contrary to some opinions, the present sponsored evening network programs appeal with substantially equal force to all major types of families.

(The chart referred to is as follows:)

CHART 12

SPONSORED NETWORK EVENING VIEWING · *By Home Characteristics*

JANUARY - FEBRUARY 1958



Senator MONRONEY. Is that weighted so that additional hours, as television stations have increased operation, have added to it?

Mr. NIELSEN. No; there are several factors aside from what appears on the surface. There is the one you mentioned, which would tend to increase the viewing. There is another factor; namely, that people now buying television sets are the ones presumably least interested in television and probably don't do as much viewing as the original families did.

Senator MONRONEY. May I ask you a very stupid question? Is there and tendency that a family, for the first year they own a television set, would look at it more often than they do after they become accustomed to it?

Mr. BOESEL. In the early days of television our clients wanted an answer to that, too; and we all assumed, because there was such a high level of activity, that viewing was bound to decline. But we did make specific analyses of new television viewers versus those who had owned a set a middling amount of time, versus those who had owned a set 4 or more years, and the answer was that there was no significant difference.

Mr. NIELSEN. If there was a tendency to decline, it was offset by better programing and more stations available.

Mr. BOESEL. The amount of television on the air hasn't changed materially over this particular span of years.

Mr. NIELSEN. Chart 12 shows the evening viewing. When we divided the homes by county size, we found that evening viewing ranged from 13.5 hours per week for the most densely populated counties to 14.8 hours for the rural areas, suggesting that people in all county sizes find television fare about equally entertaining.

When analyzed by age of the housewife, we have no significant differences. As to the family size, there is slightly more vewing in the familes of five or more people, which is understandable.

As to educational levels, those with the lowest education view 14.2 hours a week; the medium education 15.1 hours; and the highest education, the group where at least one person in the family has some college education, is 13.3 hours. While we can't guarantee that all educational groups are equally enthusiastic about the programs, they all do about the same amount of viewing.

There is another disadvantage of noncommercial television—and it is a very serious one. Nowadays the cost of distributing goods from factory to consumer creates a major part of the cost of living. The fact that television, operating in free competition with other forms of advertising, has rapidly obtained a significant and rapidly increasing share of the total advertising expenditure, and the lion's share for certain types of goods, shows that, in the opinion of corporate executives, television has demonstrated that it can move certain types of goods at a lower cost than any other medium.

It would seem to follow that any government which deprives its citizens of commercial television is forcing certain advertisers to substitute less efficient methods of distributing goods—thereby increasing the cost of distribution and lowering the standard of living.

There is another alternative which is often suggested by persons who lack an understanding of marketing and marketing research. It is generally expressed by the words: "Never mind the ratings; just

watch the cash register." In other words, judge television effectiveness on the basis of your sales trends.

Such a remark indicates failure to understand that the typical advertiser can seldom determine, from observation of his own sales records, whether his television expenditure is profitable. Let me cite a few of the reasons.

Other forms of advertising are almost always used simultaneously. There are very few important advertisers on television who are not also spending money in magazines, radio, et cetera, and it is hard to separate one from the other, no matter how good the research.

Second, promotions of various types often cloud the results. About the time you are trying to determine whether television helps your sales, your competitor puts on a 1-cent sale, his sales go up to the sky, and it is difficult or impossible to determine the effect of your television.

Competitors often change promotion, price, or product. If competitors change the price, or kind of advertising, it affects your share of the market and often defeats your attempts to measure television effectiveness.

Trade inventories fluctuate. That particular problem we have solved, for certain industries, with the Nielsen Food and Drug Index, but in other industries the current effectiveness of advertising is difficult to judge because the trade inventories are fluctuating so much that the advertiser can't always tell whether the consumers are actually buying more or less of his product.

The total market for the commodity fluctuates. Most of these commodities are increasing or decreasing in their total use and their sales may be going down or up rapidly, but the share of the market may be steady.

Trends are affected by seasons, weather, and many other factors, such as economic slumps.

Changes occur in retail distribution and in the out-of-stock condition of the product.

I could think of no surer way to crucify commercial television (or any other major advertising medium) than to encourage advertisers to rely on sales trends as the sole criterion of TV effectiveness.

I am in the marketing research business, and I tell you that one of the things greatly desired by most advertisers is a method of determining whether a television show sells goods and how much.

Senator MONRONEY. Could I ask a question there, related to marketing research? You study packaging, display, color of the toothpaste tube, its attractiveness, and everything like that. Do your reports give indication, or have you information, as to the factor of the quality of the television program reflecting the quality of the product—or is that just a void, with no relationship between a corny program and a quality product?

Mr. NIELSEN. What do you mean, sir, by "relationship"?

Senator MONRONEY. The "Voice of Firestone" is a good example, I think. It was kicked off of NBC, although it had pioneered television when they didn't have many clients. It got a low rating, I think, but Mr. Firestone determined to keep the program on because he associated the quality of the program with the quality of his products.

Mr. Cox. And it sold tires.

Senator MONRONEY. And apparently he has continued it.

Mr. NIELSEN. Are you asking whether that helps sell quality tires?

Senator MONRONEY. Now, this goes not to your automation, but advice in business research—on package quality and display—is there any relationship there, in the other business that you operate, between the impression of quality based on the quality of the program?

Mr. RAHMEL. If you use the "Voice of Firestone," I gather the Senator is saying: "Does this connote quality to the product, per se?"

Senator MONRONEY. That is right; it is quality music, and Mr. Firestone, as I read the statements, feels that carries an impression of quality of the product.

Mr. NIELSEN. The answer to that would have to be determined by research among consumers to get their attitudes. We have not done that, nor has that been the objective of any of our research work. We measure sales.

Senator MONRONEY. You relate the change—when a new toothpaste package comes out—to the sales?

Mr. NIELSEN. That is right.

Senator MONRONEY. You do say there is an affirmative impression; the more attractive qualitywise the product seems to be, you can measure that directly in sales?

Mr. NIELSEN. Yes, except for the fact that there are so many other factors that cloud the issue when you try to attribute a sales gain to one particular thing—such as a television program.

Senator MONRONEY. If you used it consistently over the years, as Firestone did, it must have pleased him and also his executive in charge of advertising to continue a quality program because it left a quality impression with the viewer.

Mr. NIELSEN. I have no doubt they were convinced that it paid, or they wouldn't do it; but what research they did to arrive at the conclusion, I don't know.

Senator MONRONEY. Do you know of anything Madison Avenue has done to try to relate the quality of the program to an impression of the quality of the product in the audience's mind?

Mr. NIELSEN. I would guess that there is a tendency to try to use quality programs to sell quality goods, but I am not sure of that.

Mr. COX. Aren't there services that try to narrow it down—to determine the precise impact of television, as distinguished from the other factors you list on the chart—by trying to determine the impact of particular commercials, sponsor identification, and things of that kind?

Mr. NIELSEN. There are attempts to do that. We have not yet thought those techniques were accurate enough to justify our going into the business.

Mr. COX. But there are other services available which apparently are able to sell these services to advertisers and networks—people who do approach it from that angle?

Mr. NIELSEN. They have sold in small quantities, but they have sold.

Mr. COX. In other words, if I bought a shaver, and there is a return post card which asks me where I got the idea of buying this brand—magazine, television, and so on—can't various procedures be employed in that way, or by interview or telephone call, to determine whether there is any correlation in the mind of the customer between

the program he has seen, and the commercial that went with it, and his decision to buy?

Mr. NIELSEN. It is being done. I hold no brief for its accuracy. That is the reason we are not in that business. It is extremely difficult. I am not criticizing what has been done, but it is extremely difficult.

Mr. RAHMEL. One of the difficulties is that you can't conduct, if I may put it in these terms, an experiment quite in a vacuum—or it is difficult in the United States—because of these many other influences that are brought to bear. A person may think he derived the notion of buying a given brand of toothpaste from a given ad, but perhaps he had gotten it from word of mouth, three other ads, or something else.

Mr. NIELSEN. Subconscious factors often enter into the making of these decisions.

Mr. RAHMEL. If you could isolate the factors, you could perform a measurement.

Mr. COX. Don't you have the fact left that the program decision, as to a particular sponsor, may have been ideal, and he may have a program which your measurements show is watched by 70 percent of the people at home that evening, and yet if you could narrow down to that particular program, as distinguished from his other advertising efforts, you would find that the commercials employed on the program did not do the job, that they did not sell, or that they offended people? I know one automobile company publicly apologized for commercials on a program which was widely watched. The Philip Morris Co. switched from "I Love Lucy," when it was the highest rated program in the country, because it apparently didn't sell cigarettes. There is no necessary correlation between exposure and success; it simply gives the copywriter a chance to get his message to the public.

Mr. NIELSEN. He must know what kind of audiences he is reaching. If he is trying to sell Rolls Royces, to take an exaggerated case, he had better make sure the audience has a high percentage of wealthy people. It is not only the effectiveness of the message, but whether the program talks to the kind of people he wants to talk to.

My company has made a terrific effort to persuade advertisers to take that factor into account in a highly scientific way, but we have concluded that industry is not ready for it. It is a difficult yardstick to apply. But they do try to apply it in a general way. If they are selling chewing gum, they don't limit the audience to millionaires. If they are selling Cadillacs, they make a special effort to reach people with large incomes.

They also know their market by city size, for example, if you are selling condensed milk, you had better get into the big cities and the small families, because they comprise the best market for that sort goods.

If you are selling cereals, you had better get into the homes with large numbers of children. Advertisers pay attention to such factors.

We spent half a million dollars some years ago trying to develop a system for measuring the sales produced per dollar expended for each network radio program, and we almost succeeded, but not quite.

There are too many other factors entering into it, and we had to give it up. Television has the same problem.

In the early days of television in England it was easy to measure sales effectiveness, because they were only broadcasting in the London area, and we took the consumer sales trend in the London area and compared it with the rest of the country, where there was then no commercial television. But now, with television all over the country, we can't do it so easily.

Chart 13 summarizes the criticisms of TV audience research.

(The chart follows:)

CRITICISM OF TV AUDIENCE RESEARCH

1. Criticisms of accuracy, based on:
   - (a) Lack of understanding of statistics.
   - (b) Failure to distinguish between sound and unsound methods.
2. Failure to understand research techniques.
3. Blind opposition - for selfish reasons*
4. Blaming the "ballot counter" instead of the voter.
5. Opposition to the "please the public" policy.
6. Failure to face the alternatives:
   - (a) Inadequate advertiser support.
   - (b) Government-supported TV.
   - (c) High taxes
   - (d) Unsatisfactory entertainment.
   - (e) Higher distribution costs-lower living standard.
7. Misinterpretation and misapplication.

* USUALLY ACCOMPANIED BY THE INCONSISTENCY OF ATTACKING LOW RATINGS BUT DEFENDING HIGH ONES!

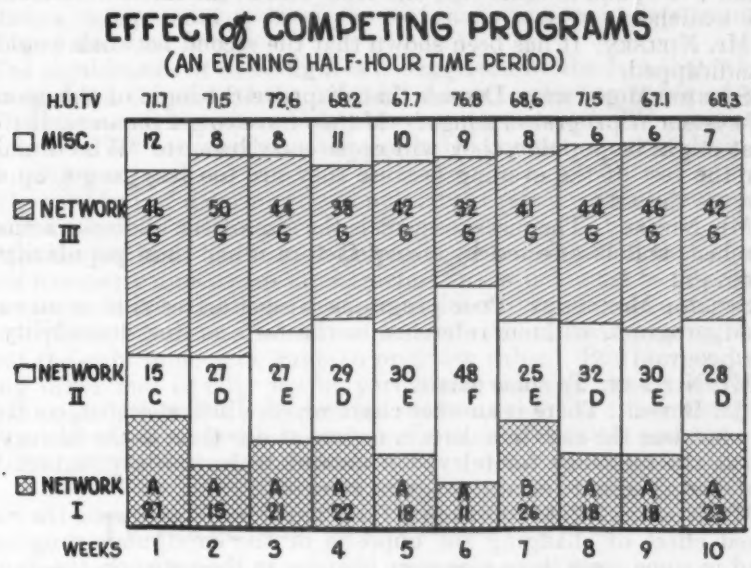
Mr. NIELSEN. The problem of misinterpretation and misapplication of audience research is very serious, and the Nielsen organization has exerted a continuous and strenuous effort to solve it. We do this by a procedure known as client service, which involves expert analysis and periodic personal, graphic presentations to all clients, and an effort to help each client interpret our findings in a sound manner. For this work our broadcast division employs the full time of 117 people.

It may surprise you to learn that one of our major problems is to create and maintain the realization that a rating does not measure the popularity of the program, although most people think that it does.

Actually the rating is a record of the audience size, and while this is certainly affected by program popularity, it is also affected by many other factors. It is affected by the season of the year, the day of the week, and the hour of the day. It is also affected by the popularity of the network; you can shift a program from one network to another and get a change of rating. Audience size is also affected by popularity of stations, number of stations, competing programs on other networks, preceding and following programs, and the amount of promotion given to the program.

The effect on a program's rating of changes in the strength of the competing programs is shown clearly in chart 14.

(Chart 14 is as follows:)


EFFECT of COMPETING PROGRAMS
(AN EVENING HALF-HOUR TIME PERIOD)
H.U.TV 71.7 71.5 72.6 68.2 67.7 76.8 68.6 71.5 67.1 68.3
MISC. 12 8 8 11 10 9 8 6 6 7
NETWORK III 46 G 50 G 44 G 38 G 42 G 32 G 41 G 44 G 46 G 42 G
NETWORK II 15 C 27 D 27 E 29 D 30 E 48 F 25 E 32 D 30 E 28 D
NETWORK I A 21 A 15 A 21 A 22 A 18 A 11 B 26 A 18 A 18 A 23
WEEKS 1 2 3 4 5 6 7 8 9 10

Mr. NIELSEN. Here you have three networks, and I call attention to the program on network II. In week 1, it obtained only a 15 percent share of the audience. It was up against a strong program on network I. Then it did better in weeks 2, 3, 4, and 5, but in week 6 it goes way up and reduces the audience to the program on network I, which had a 27 percent share when it had weak competition, but is down to 11 percent when a popular program is placed in opposition.

Senator MONRONEY. Does that lead to paralleling programs? I note one television station has a spectacular program on at a certain hour, which has been previously announced, and the other networks will try to get something that you just have to have, too. Unless you have three television sets and six eyes, you are going to miss the one gold nugget that you get over a period of maybe a month's programing.

Mr. NIELSEN. That is sometimes the case.

Senator MONRONEY. That of course doesn't come under your department, but it certainly seems if they could spread the "goodies" a little bit. Aren't we in a sort of get-the-brass-ring technique every week? The networks parallel good programs, and then you have cheese and crackers for the rest of the week—or the rest of the month?

Mr. NIELSEN. I think there is that factor. Laying no claim to being an expert in programing, if one network allows another network to get the lion's share of the audience at, say, 7 to 8 p.m., the network that got the big share is likely to hold it the rest of the evening, because people don't change their dials too easily. A network can't allow its competitor to get too large a share of the audience or

it will experience great difficulty in getting a satisfactory share for the rest of the evening.

Senator MONRONEY. You mean if one network had a spectacular from 7 to 8, and another had one from 8 to 9, the latter wouldn't get the audience?

Mr. NIELSEN. It has been shown that the second network would be handicapped.

Senator MONRONEY. Doesn't that disprove the logic of the on-and-off system of program ratings? If they have to get on an earlier one that might be popular, they will apparently listen to "Who dunnits" for the rest of the evening because they are too lazy to get up and change the set?

Mr. NIELSEN. The measurement is the size of the audience actually reached, and is affected by many factors other than popularity of program.

Senator MONRONEY. Poor programs can get a free ride on an early good program, without reference to the taste or the desirability of the program?

Mr. NIELSEN. To some extent.

Mr. BOESEL. There is another chart which illustrates that, contrary to what was the case to a certain degree at one time in the history of radio, the tendency for television viewers to be too lazy to turn the dial doesn't seem to exist to so great an extent.

Mr. NIELSEN. Chart 15 shows, for a number of programs, the combined effect of changing the opposite or the contiguous programs. And in some cases there also were changes in the network, the day of the week, and the hour of the day. The net effects ranged from a decrease of 43 percent to an increase of 87 percent.

(Chart 15 is as follows:)

EFFECT of CHANGING OPPOSITE or CONTIGUOUS PROGRAMS

PROGRAM	SHARE OF AUDIENCE BEFORE	SHARE OF AUDIENCE AFTER	PERCENT CHANGE
A	42%	24%	-43
B	45	27	-40
C	46	28	-39
D	34	23	-32
E	39	27	-31
F	43	52	+21
G	26	36	+38
H	25	36	+44
I	22	34	+55
J	23	43	+87

Mr. NIELSEN. The programs themselves have not changed substantially. They should be, and are, equally popular, but the facilities for broadcasting have changed, so that one goes down 43 percent, and at the other extreme the other goes up 87 percent. This merely demonstrates that popularity is only one of many factors in determining audience size.

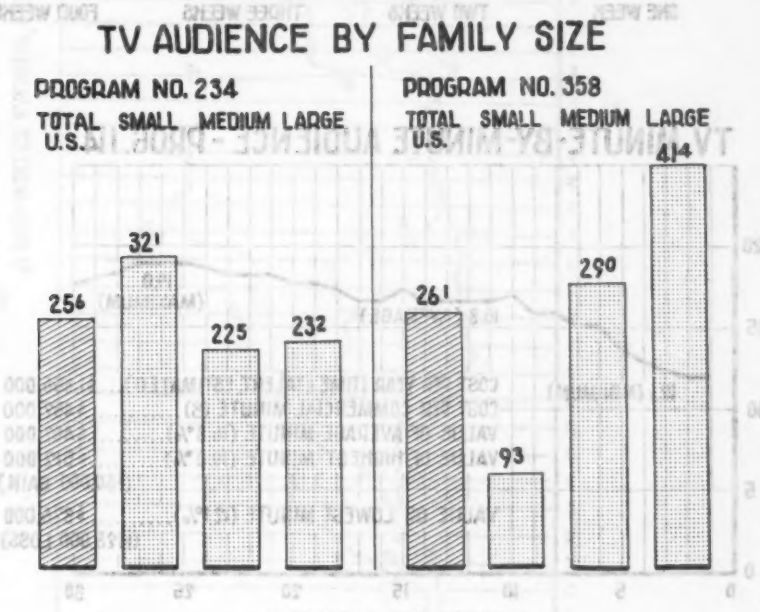
The significance of these figures is suggested by the fact that when moving from the end of the 1956–57 season to the beginning of the 1957–58 season, there were only two evening network TV programs which were not subjected to a change in the competing, preceding, or following programs.

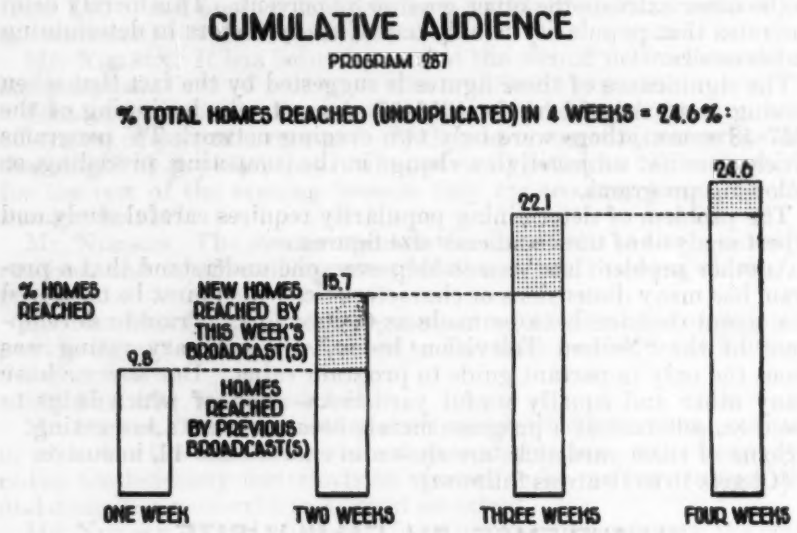
The problem of determining popularity requires careful study and expert analysis of these audience size figures.

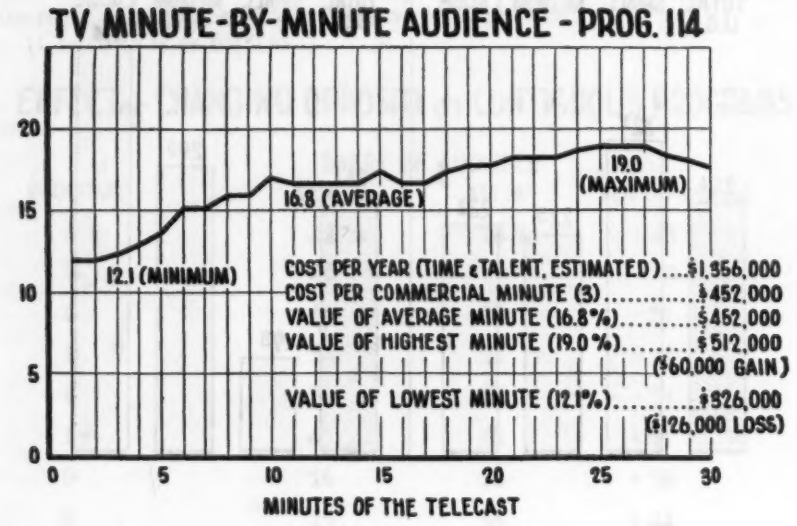
Another problem has been to help everyone understand that a program has many dimensions or characteristics which must be measured if a sound decision is to be made as to its value. Prior to development of the "Neilsen Television Index," the ordinary rating was about the only important guide to program value. But now we have many other and equally useful yardsticks—each of which helps to avoid cancellation of a program merely because it has a low rating.

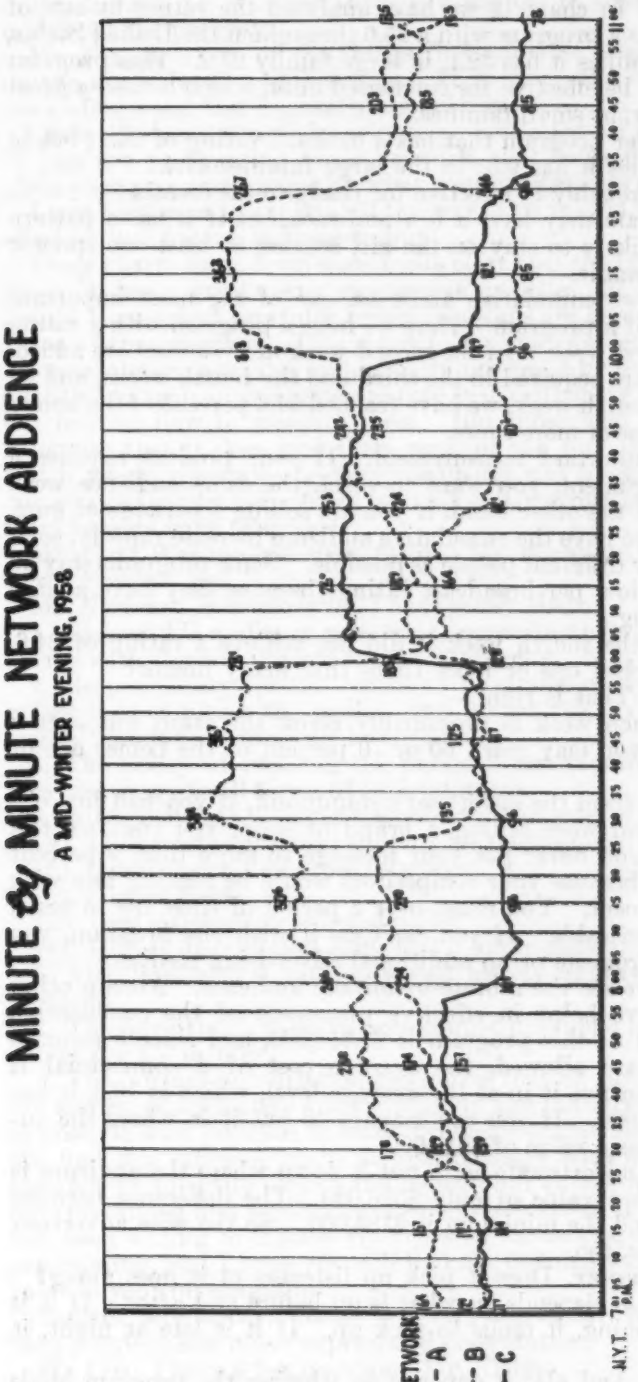
Some of these yardsticks are shown in charts 16 to 19, inclusive.

(Charts 16 to 19 are as follows:)




CUMULATIVE AUDIENCE
PROGRAM 257
% TOTAL HOMES REACHED (UNDUPLICATED) IN 4 WEEKS = 24.6%:
% HOMES REACHED
NEW HOMES REACHED BY THIS WEEK'S BROADCAST(S)
HOMES REACHED BY PREVIOUS BROADCAST(S)
9.8
15.7
22.1
24.6
ONE WEEK
TWO WEEKS
THREE WEEKS
FOUR WEEKS


TV MINUTE-BY-MINUTE AUDIENCE - PROG. 114
20
15
10
5
0
0
5
10
15
20
25
30
MINUTES OF THE TELECAST
12.1 (MINIMUM)
16.8 (AVERAGE)
19.0 (MAXIMUM)
COST PER YEAR (TIME & TALENT, ESTIMATED)....$1,356,000
COST PER COMMERCIAL MINUTE (3).....$452,000
VALUE OF AVERAGE MINUTE (16.8%).....$452,000
VALUE OF HIGHEST MINUTE (19.0%).....$512,000
($60,000 GAIN)
VALUE OF LOWEST MINUTE (12.1%).....$326,000
($126,000 LOSS)


MINUTE by MINUTE NETWORK AUDIENCE
A MID-WINTER EVENING, 1958
NETWORK
— A
— B
— C
N.Y.T.

Mr. NIELSEN. In chart 16 we have analyzed the rating by size of family. Here is a program with a 25.6 throughout the United States, but in small families it has 32.1, in large family 23.2. This program would probably be effective for condensed milk, which is used a great deal, as we know, by small families.

Here is another program that has a national rating of 26.1; but in the small families it has 9.3; in the large families 41.4.

This would probably be effective for ready-to-eat cereals.

Now, a program may have a low audience, but if it has a pattern like that, it is likely to stay on the air, because at least one sponsor will probably want it.

Chart 17 shows cumulative audience, one of the most important characteristics of a program. Here we have a program with a rating of 9.8 for the first week. In the second week new viewers are added, more new ones are acquired in the third and the fourth weeks, and by the end of the fourth week, we have reached 24.6 percent of the homes in the country one or more times.

This is an important measurement. If your product requires a complicated argument, you want to reach the same audience week after week. On the other hand, if you are selling a package of gum, you would like to have the cumulative audience increase rapidly, so as to reach as many different people as possible. Some programs stay on the air despite low per broadcast ratings because they have a high cumulative rating.

Mr. COX. In the fourth week it did not achieve a rating of 24.6. It had just reached one or more times that many homes?

Mr. NIELSEN. That is right.

The rating each week is presumably about the same, but over a period of time you may reach 60 or 70 percent of the homes one or more times.

Looking at it from the advertiser's standpoint, if you had just one TV program and were selling a brand of soap, you couldn't feel comfortable if you never got your message to more than 9 percent of the families, because your competitors would be making hay with the other 91 percent. You must, over a period of time, try to reach as many as practicable. If you can't do it with one program, you need a second program or an additional advertising medium.

In chart 18 we see the minute-by-minute audience. Among other things, this curve helps in effective placement of the commercial. The annual cost of this program is $1,356,000, and since 3 minutes of commercial are allowed, the average cost of a commercial is $452,000. If you put it in at the average level, which is 16.8, it has a value of $452,000. If you can manage to put it in where the audience is 19, it has a value of $512,000.

If you are so unfortunate as to put it down where the audience is only 12.1, it has a value of only $326,000. The difference between the maximum and the minimum is $186,000. So the wise advertiser uses these figures, too.

Senator MONRONEY. Does it pick up listeners at it goes along?

Mr. NIELSEN. It depends on what is on before and after. If it is early in the evening, it tends to pick up. If it is late at night, it will go down.

Mr. RAHMEL. And also it depends on whether the program holds its listeners.

Mr. BOESEL. Or whether there is a change in competition in the middle of the program.

Mr. NIELSEN. One of the things that helps to keeps the program on the air is loyalty of listening. If it keeps the same people on week after week, that is usually a good sign.

Chart 19 shows minute-by-minute audience for all three networks. If you are programing for a network, this helps decide where to place your programs, based on what your competitors do.

I won't attempt to explain all the ways this is used, but it is a very effective tool for use in programing.

These charts have, I am sure, made clear that the typical television program has a great many measurable qualities, all of which really should be weighed carefully before decisions are made regarding the value of the program. This is not to say that we deny the existence of certain other qualities undoubtedly possessed by some programs—qualities of such an intangible nature that neither we nor anyone else has learned how to measure them. But those who use our service recognize that it does lead them most of the way through a forest which would otherwise be very confusing and hazardous, and that our service thereby helps them to avoid costly errors and derive maximum benefits from television.

Mr. Cox. Was the last chart the one Mr. Boesel referred to?

Mr. BOESEL. Yes.

Mr. NIELSEN. Summarizing, I have shown that:

1. Nielsen TV audience research is accurate and reliable and conducted with absolute impartiality and integrity.

2. Responsibility for the demise of programs rests on those whose policy it is to please the public—and not on the TV ratings, which merely "count the votes" cast by the public.

3. The policy of pleasing the public is not peculiar to television. It is customary in all forms of entertainment.

4. Alternatives to pleasing the public would tend to create:

(*a*) Inadequate advertiser support for television.

(*b*) Government-supported television.

(*c*) Higher taxes.

(*d*) Less satisfactory entertainment.

(*e*) Higher distribution costs, and a lower standard of living.

5. Abolition of TV ratings would merely aggravate the present problems.

6. The advertiser's sales records cannot provide a satisfactory substitute for TV ratings.

7. The Nielsen organization recognizes that its function is to measure audiences accurately and thoroughly and to concern itself as little as possible with political or social problems of the television industry. We find it a fulltime job to furnish industry with accurate, reliable research of adequate scope aand to help our clients in making sound interpretations and applications of our research. I have, nevertheless, been willing to express my views on various aspects of television programing, and I hope you will find my testimony of some practical value in your investigation.

Senator MONRONEY. Thank you very much, Mr. Nielsen, for your very complete and much appreciated presentation.

Mr. Cox. I have a few questions, Mr. Nielsen.

Isn't there a danger that since the people in the sample home know that a record of their viewing habits is being made, they will be subconsciously influenced to make selections which will put them in a good light? In other words, I think this is referred to as "conditioning of tuning behavior" in this publication of the Advertising Research Foundation which you mentioned.

Mr. NIELSEN. That is right.

Mr. COX. Is there some such a possibility, because you have lost the element of anonymity—they are no longer just one of the mass whose name is not known, because they are picked up on the street or called at random—they are known to you in great detail? Does this, in your judgment, have any chance of affecting the tuning habits which they develop?

Mr. NIELSEN. Well, it is a good question, and in a book which I wrote for the benefit of the British television industry when they started off, I have a comment on that, and I think the quickest way to answer the question is to read that to you.

In connection with any research technique involving the use of sampling, it is quite proper to ask whether the research operation itself creates appreciable alterations or abnormalities in the behavior of the families under observation.

To be specific, does the presence of an Audimeter cause any significant changes in the TV viewing habits of the family? This type of question was, of course, raised in the United States when Audimeters were first introduced commercially, and while the subject has been settled to the satisfaction of American broadcasters, agencies, and advertisers, it is understandable that the question would arise as the TV industry in Great Britain contemplates adoption of the Audimeter technique.

The following information and points of view, based on American experience, should prove helpful:

1. It should be recognized that there cannot be any direct and absolute measurement on this subject—because the Audimeter itself should be used to measure accurately the television viewing habits of a family, and in order to determine whether the installation of an Audimeter had altered the viewing habits of a family, it would be necessary to make comparisons between:

(b) The viewing habits of the family after the installation of the Audimeter, and

(b) The viewing habits of the family after the installation of the Audimeter.

Obviously, while item 1(*b*) above is known, item 1(*a*) can never be known. It is for this reason that an absolute and direct comparison is impossible, and it is therefore necessary to seek other bases for reaching a conclusion.

Since you can't put the meter in before it is put in——

Mr. COX. You can't smuggle it in.

Mr. NIELSEN. You can't do it that way.

[Reading:]

2. In general, in order to alter the viewing habits of a family, the presence of the Audimeter would have to either:

(*a*) Cause the family to look at programs which it had previously decided were not interesting, or

(*b*) Cause the family to refrain from looking at programs which it had found interesting.

It seems appropriate to consider whether there are any logical reasons why the members of a family would often act in accordance with either item 2(*a*) or item 2(*b*) or both. What possible motive could they have?

It would seem quite illogical to assume that a family would deliberately—and for no good reason—elect to deprive itself of the pleasure of looking at those programs which had been found to be interesting. And it is almost equally difficult to imagine that the typical family would take the trouble (and spend

the electric power) required to look at programs which had previously been found uninteresting.

The difficulty in causing families to change their TV viewing habits can best be appreciated when it is considered that every program sponsor in America is very anxious to cause changes in viewing habits (changes in favor of his program), but none of them has found any effective method of achieving this—by any "artificial" means. It is not easy to change the normal TV viewing habits of the typical family.

3. There is one very concrete measurement which suggests that the presence of an Audimeter in the home does not cause any increase in the normal amount of receiver usage. (It seems reasonably safe to assume that if Audimeters caused any change in receiver usage, the change would be in the upward direction, as the typical person is very unlikely to deprive himself of listening to his usual programs merely because a researcher has installed an instrument in his home.)

Now if the presence of an Audimeter causes an increase in the amount of receiver usage, it is obvious that the result would be an increase in the preference shown, among Audimeter famiiles, for those brands of goods which are heavily advertised via broadcast methods, for it is a well-established fact that, on the whole, American broadcast advertising has been very effective in selling the brands advertised.

In the United States we have conducted an elaborate survey based on the above premises. Each of a large number of families which had been Audimeter equipped for a long time was questioned as to the "brands bought last" with respect to a long list of commodities having brands heavily advertised via broadcasting.

Identical questions were asked of an accurately matched sample of nearby homes in which no Audimeters had been installed.

Here are a lot of homes that had Audimeters for years. You ask what is the last brand of coffee bought, the last brand of tea, and so on, and then you go across the street to a similar home and you ask the same questions.

[Reading:]

The total result, based on averages for 37 brands highly advertised via broadcasting, showed no significant differences between the two groups of homes.

4. In another approach to this question, representatives of one of our American clients (Procter & Gamble Co.) interviewed a substantial number of homes in which Audimeters had been installed for a long time and from which we were about to remove the instruments.

In each case the investigator discussed broadcast listening habits with members of the family and made no reference whatever to Audimeters, but the conversation was skillfully directed so that, before long, the repondent usually brought out the fact that an Audimeter had been installed in the home. Thereupon the investigator expressed interest in the subject and asked certain questions which brought forth the following replies—these having been furnished to us by the Procter & Gamble Co.:

A. "To what extent, if any, did the presence of an audimeter in your home affect the quantity of your listening?"

Answers: More listening, 3 percent; less listening, 2 percent; no effect on listening, 95 percent.

B. "To what extent, if any, did the Audimeter affect the character of your listening, your choice of programs, etc.?"

Answers: No effect, 100 percent.

5. The foregoing results are easy to understand when it is kept in mind that the typical Audimeter (*a*) is out of sight, (*b*) is noiseless, (*c*) has no effect on the quality of the reception or on the physical operation of the receiver.

* * * * * * *

6. In the research profession it frequently happens that the research organization and those of its clients who have a thorough understanding of research techniques are perfectly satisfied on a certain point of technique, but still the technique may be subject to attack from clients who lack a detailed understanding of research techniques, and from competitors of the research organization.

In such cases, it is merely prudent and good business for the research organization to take all practicable steps to either avoid or minimize the basis for the criticism—even though there may be no logical ground for such criticism.

Acting on these principles, it has been our policy in the United States to minimize the percentage of cases in which our fieldworkers inform Audimeter families as to the function of the instrument.

This is not as difficult as it sounds. The average person is not technically educated, and is scarcely in a position to understand the real functions of a complex electronic instrument such as the Audimeter. We have found it rather easy, when asked to explain the Audimeter's function, to employ terms sufficiently technical to cause most respondents to quickly lose interest in the question of the Audimeter's function and turn attention to other aspects which are really of greater concern to the family.

For example, the principal points which the typical family really wants to establish are these:

A. Will the Audimeter damage my TV receiver in any way, or affect its performance?

B. Will the Audimeter use any electric current?

Our fieldworkers generally find it easy to focus attention on these really pertinent questions and to get the instrument installed by giving satisfactory answers to these questions, even though the family has not learned the exact purpose of the instrument—except that it is designed to help the broadcasting industry improve the character of the entertainment furnished to the viewers—a broad objective with which almost any TV set owner will sympathize.

Incidentally, the problem of answering questions A and B above is simple. We furnish a written agreement, guaranteeing the set owner against any Audimeter-caused damage to his receiver, and we agree to share equally with him the cost of all repairs to the TV receiver as long as our Audimeter is installed.

And we agree to pay cash fully equal to the cost of the electric power. In addition, there are other compensations which render the entire Audimeter proposition quite attractive to the average family.

As a result of the foregoing, only 16 percent of the persons living in Audimeter-equipped homes are aware of the real function of the Audimeter. (This includes those whom our fieldworkers found it necessary to inform, those who obtained this information from others in the family and those who, although not informed by us or others, made a correct guess as to the Audimeter function. It also includes those who expressed the opinion that the Audimeter measures listening to stations, but who failed to recognize that, as a practical matter, this is equivalent to measuring the listening to programs.)

It is obvious, therefore, that even if the Audimeter does exercise an effect on broadcast listening habits (which, in view of all the evidence, seems extremely unlikely), the net effect has been reduced to negligible proportions because it cannot possibly occur in more than 16 percent of the homes.

Some thought it measured the number of elevated trains that went by, or the quality of the picture, and so on.

Mr. Cox. Don't you contract with them in your own name, so if they read Time magazine, which says that the A. C. Nielsen Co. makes its measurements in this way, they are going to have some suspicion about the black box?

Mr. NIELSEN. The number of times Time magazine reports that and the number of times the family would read the article is small, because as I say, only 16 percent know after the Audimeter has been in the home for about 5 years.

Mr. COX. When the set is serviced, doesn't the serviceman observe that something foreign is attached to the set and make inquiry; and would he not be likely to have knowledge of the purpose of the instrument and therefore ascertain that this family is one of the sample, and might mention it to others?

Mr. NIELSEN. Still, the net result is that only 16 percent are interested enough in it to know or care. As long as they are getting money from us, which they do, and they get gifts, they are kept happy.

Mr. COX. I am talking about the outsider that comes in—who gets no money from you—but he now knows by observation that an Audi-

meter is present in the home. Is any effort made on your part to check the degree to which this occurs, and to drop the home if it is found that someone has learned that it is part of the basis for measurement?

Mr. NIELSEN. No, I don't think it hurts any to have the repairman do that. He isn't doing the listening in the home.

Mr. RAHMEL. Several years ago, for purposes of measuring audience composition, we set up an entirely new panel in which we have installed the recordimeters Mr. Nielsen has shown you. Twelve times a year we get data about set usage, 1 week out of each month. The other weeks, the homes perform no work.

We are able to determine by taking those data and comparing them with the data from Audimeter homes, that there are no differences in the quantity of viewing in the Audimeter panel versus the other panel.

Senator MONRONEY. Did I understand you to say, Mr. Nielsen, only 6 percent of these 1,050 know the purpose——

Mr. NIELSEN. 16 percent.

Now, perhaps you should hear the opinion of one of the greatest broadcast users in the world, Procter & Gamble Co., who instigated these investigations—some of which cost as much as $28,000. In every case the technique was approved by the Procter & Gamble Co., and here is the letter they wrote to us and authorized us to publish:

> We are now fully satisfied that the Nielsen sample is representative of all homes in the Nielsen area in respect to both quantity and quality of listening. Specifically, we have reached the definite conclusions that—
> (*a*) Nielsen families are at home a normal percentage of the time.
> (*b*) Nielsen families are normal in the amount of their listening.
> (*c*) Nielsen families are normal in program and network preferences.

Mr. COX. That leads to a question as to what happens when there is serious illness in the home, or the family goes on vacation, or the set blows a tube and it is out of service. Have you determined that these things happen at a normal rate of incidence in these homes, as compared to the national average, so no adjustment is required to take account of these?

Mr. RAHMEL. We have made a study on the incidence of vacations, and that checked out against the national figures. I don't recall having made any study on the matter of incidence of receiver failure except that the figures that we have on our share of repair costs has doubled, and this checked pretty closely with figures published by RCA or one of the other manufacturers a few years ago.

Mr. NIELSEN. There is nothing about an Audimeter that can cause a set to have mechanical trouble. That is one of the important things in its design. There is no reason to think that the sets in our homes would have more or less trouble than any other sets.

Senator MONRONEY. How long did you say these people had these in their homes?

Mr. NIELSEN. About 5 years on the average.

Senator MONRONEY. And only 16 percent of them figure out what it is for?

Mr. NIELSEN. It is amazing, isn't it?

Senator MONRONEY. Maybe we ought to take that IQ. [Laughter.]

Mr. NIELSEN. There is no education that can quite compare with just going with a group of our fieldmen, visiting a true sample of

American homes and finding out how they live. I recall one time we were going to take pictures. We asked one woman for permission and she said, "Yes, if you will let me get the ducks out first." She had a piano across one corner of the room and she was keeping ducks behind the piano. They aren't all like that, of course.

Senator MONRONEY. It is almost inconceivable that they could keep a black box like that in their homes for 5 years and no more than 16 percent would figure it out—84 percent of the people are oblivious to the rating systems, and the fact that you are being nice to them for some good reason.

Mr. Cox. You have indicated, for at least your local measurements, you use a diary to supplement an Audimeter.

Mr. NIELSEN. First of all, we use the Audimeter for whatever number of homes we have in the area, but that is not a sufficiently large sample for any one city, so we add homes in which we have Recordimeter-controlled diaries.

Mr. Cox. Have you at various times been critical of the use of diaries as a means of measuring?

Mr. NIELSEN. Oh, yes.

Mr. Cox. And it is your position that the simple addition of the Recordimeter has eliminated those problems?

Mr. NIELSEN. Not wholly, but it has gone a long way toward it, and combined with the fact that the Audimeter-produced part of the data are accurate, we have a reasonably accurate total measurement for local conditions. It is not as accurate as it would be if we could use Audimeters for the entire sample, nor does it provide minute-by-minute data. We tried an all-Audimeter service in Cincinnati, New York, Chicago, and Los Angeles but found that over a long period of time clients were not willing to pay the cost of it.

Mr. Cox. So in other instances you have your normal Audimeter sample and, for local services, supplement it by the Recordimeter-diary alone?

Mr. NIELSEN. That is right.

Mr. RAHMEL. There is another consideration. It is difficult to get every-week ratings for the diary systems using the same homes. The Audimeter solves that problem. Every-week ratings are very important for national network programs.

Mr. Cox. We have been advised that you produced figures in March of 1955 showing, on a particular Wednesday night at 7:30 p.m.—if your audience figures and your figures for average home and your figures for share of audience were extended to all viewers watching—you obtained a figure of children 4 to 11 supposedly watching television which, according to this authority, exceeded by some 38 percent the census figures for children in that a group. Now, can you comment on that for us?

Mr. NIELSEN. I can't.

Mr. CORDELL. I will be glad to comment on that.

No. 1, this is distinctly the local service, depending upon diaries, and as we have already explained, diaries have some limitations.

There is also the question of definition. We asked our families to record children, and we have a cutoff where we try to get them not to include children under a certain age. You are not always able to get the people who keep these records to adhere strictly to these definitions,

and quite frequently they could and do include in the count children below that age group; and this, I think, is partially the explanation for our exaggeration, in the case you cited of the number of children under a certain age group.

You also have, in a sample that is used for local service, a wider variation in your sampling deviations than you would have in a national sample of a thousand.

Mr. Cox. Is this because you haven't selected the sample as carefully as the national sample?

Mr. CORDELL. No; merely because it is smaller.

Mr. Cox. How many do you add, using Recordimeter and the diary, in New York City in proportion to the 105 audimeters for the national sample?

Mr. RAHMEL. It is 300 additional homes in New York, and the reason we use a somewhat larger number of additional homes in New York for this purpose is that there are 7 stations, as you probably know, in New York and the opportunities for splitting the audience are therefore greater.

Mr. Cox. Then you actually have a larger sample for this purpose than you have on the New York share of the national audience?

Mr. RAHMEL. In order to get a reasonable estimate of the audience composition in New York, we have had to add 300 homes to supplement those having Audimeters, which is about 105. You see the audience composition information comes solely from the diaries.

Mr. CORDELL. I would like to call your attention to one very important fact bearing on our alleged reporting of too many children. When you are searching through a large number of findings, trying to find that exceptional case, it is like my reporting to you my best golf score. I don't shoot that well all the time. When I try to find the widest deviation occurring in a long series, obviously I am no longer talking about the average error or the typical error; I am talking about one over here in left field. The case you cited is by its very nature an exceptional case, where both the sampling error and the definitional problem came into play. Obviously people do get royal flushes every once in a while in playing poker, but they don't occur frequently.

Mr. NIELSEN. If you did not get a case like that once in a while the system would be a fake. The shape of the probability curve is such that you are going to get a royal straight flush once in a while, and that is probably what you got in that case. Also remember you are producing millions and millions of figures.

Mr. Cox. It has been charged, in connection with that situation, that your sample is overweighted in favor of large families. Can you give the committee any information as to the average size of families in your sample compared to the average family size for the station?

Mr. CORDELL. I will comment on that. In fact, I was at the Census Bureau yesterday talking to the Assistant Director there, and I brought out the fact that no commercial organization can achieve the same average family size as comes out of the Government surveys. The reason for this is that we define our households around the living room, because that is where the television set is located. The Census Bureau in their surveys define the family unit, the dwelling unit, around the eating facilities, and this, of course, means that some people who may be what we might term "satellite people" in that

dwelling unit, and get counted by the Census Bureau in their surveys as a separate household, would be incorporated into our definition of those encompassed within the television activity that we are measuring; so that, per se, we would always come up with a higher number of persons per household, based on our definition, than the one the Census Bureau uses in their operations.

Mr. Cox. You lost me somewhere. How do you get more people in the living room?

Mr. Cordell. A boarder who would be included within the scope of our household definition would for the Census Bureau, be a separate household. Such a person may have free use of this particular dwelling unit's living room, and its television set, so that our definition of the household can't come out exactly the same as the definition of the Census Bureau. They have 10 pages of questions and they practically draw a map of the household to explain their definition of a household. We use a slightly different definition.

Senator Monroney. Do you have any of these located in anything other than homes—bars or hotels?

Mr. Cordell. No; we do not. Our definition of universe is the household definition.

Mr. Cox. You don't measure viewing anywhere except in the home?

Mr. Cordell. That is right.

Mr. Nielsen. But that is not true of radio.

Mr. Cox. Do you still attempt to measure automobile radio listening?

Mr. Nielsen. Not only attempt to, sir; we do it.

Mr. Cox. Do you install an Audilog?

Mr. Nielsen. Yes; and a Recordimeter.

Mr. Cox. One of the grounds on which all of the ratings have been subjected to criticism is the sharp discrepancies which sometimes result in the rating of the same program by different services. Of course, I suppose the defense of every one would always be that his is right and the others are obviously wrong.

We have, for instance, drawn from this same source an indication that in April 1955, ARB gave "Toast of the Town" a rating of 60.8, and you showed 40.9, which is a difference of a very substantial degree. ARB gave "Robert Montgomery Presents" 33.5, your rating was 20.3. For "I've Got a Secret," they have a lower rating of 32.1 and you had 42.2. For "December Bride," their rating was 22.4, yours was 38.9.

Now, obviously, of course, some difference in result, because of the difference in methods, would naturally be expected, but have you any explanation for the extreme difference in results which is given here for programs chosen at random—the same result, more or less, for the whole nighttime lineup was indicated in that particular comparison of surveys.

Mr. Nielsen. Well, I didn't come here to criticize my competitors; I am merely trying to show that we do this thing accurately. We have devoted a great deal of study to this question. If you want to talk about diaries, in November and December, 1953, we made an elaborate comparison between the ARB figures and the Nielsen figures, and the results are shown here. We retabulated all of our figures to get them on exactly the same basis as ARB, converting our 6-minute rating to

the 5-minute rating used by ARB. We arranged the programs in sequence, based on the percentage difference. In the most extreme case, their figure for a program was 93 percent below ours, the next is 83, 70, 65, and so on, and then in decreasing percentages, finally turning from minus to plus, and their final rating was 66 percent above ours.

In other words, from 93 percent below to 66 above. I agree that is quite a difference, and perhaps it would be clearer to see if I summarize it this way. For all programs combined, their figures were 15.2 percent below ours. By day parts—that is morning weekdays, afternoon weekdays, evening weekdays, morning weekends, and so on, the difference ranged from minus 28.5 percent to plus 5.2 percent.

By networks, from minus 33.3 percent to minus 12.3 percent. In other words, for one of the networks they showed ratings averaging 33.3 percent below what we showed, for another they averaged 12.3 percent below.

By program types, ARB averages ranged from 37.7 percent below ours to 2.2 percent below, and by individual programs, as I said, from minus 93.7 percent to plus 65.8 percent. The average of the percent differences was 24.2 percent.

Our estimate of the average error of the uncontrolled diary system, other than the sampling error, is 25 percent.

Senator MONRONEY. Would it not indicate this thing we were talking about earlier—that people are not like grains of wheat or tons of coal; and whatever the sample is based on, even though they might be the same percentage segments, economic or educational levels, listening habits do vary greatly. And that your complete and total accuracy among your 1,050 may be shared by the others as well, but people just have different tastes, depending on who keeps the scorecard.

You may tabulate it all right, but this man thinks it is a fielder's choice, and the other scorer calls it a hit.

Mr. NIELSEN. The differences here are only accounted for in part by the sampling error, and that part can be determined mathematically. We have already shown the sampling error inherent in our figures, and ARB also has an error based on the fact that he is using a sampling procedure, and if you put the two together, the mathematics can calculate what the average difference should be, assuming both systems were accurate in selecting samples, getting the information, and making the computations.

Senator MONRONEY. It would also indicate, would it not, that there is a nonhomogeneous taste in television fare; that you can't predict what these people are going to do, or what one person does? John Doe does differ in his listening habits. He may have the same occupation, the same number of kids, the same type of house, but he might like one type of program and the other fellow might like another. And on that 1,050—and I don't know what the base is on this other poll, it is just different people. You obviously don't get it from the same people.

Mr. NIELSEN. I am afraid you are reaching the wrong conclusion. If the ARB were using an absolutely accurate meter, if their sampling was good and our sampling was good, you would get differences, because we are both using a sampling process, and the sampling process has some error in it. If we increased our sample and they increased theirs, and we both finally got to the point where we were both

measuring every home in the country, our results would be identical, because we have assumed that each of us has accurate meters.

We have already discussed these differences which are mathematically computable due to the use of samples. What I am saying is that the difference between Nielsen and ARB go far beyond that difference.

Mr. Cox. In other words, if you made adjustments for your margin of error and he made adjustments for his margin of error, you would still not get the same results?

Mr. NIELSEN. What I am telling you is that there was a difference, averaging about 25 percent, not accounted for by the sampling difference.

Mr. Cox. Yet both of these services are services that are purchased by substantial entities in the broadcast business and used—at least whenever the particular one serves their own private interest?

Mr. NIELSEN. That, sir, is a practice we deplore. ARB has reported that the percent of business which they get from the networks is, I believe, about 5 percent. Is that what they reported to you?

Mr. Cox. It is on that order.

Mr. NIELSEN. That is a very small amount of business, compared to what we have.

Mr. Cox. 5.5 is theirs. Yours is approximately one-third.

Mr. NIELSEN. There is quite a difference, and ours is a third of a bigger total business, too. There are other differences, in fairness to them, which explain why our service is used more. It produces more different types of information, more useful types of information—minute by minute, cumulative audience, and so forth; and we measure 4 weeks each month.. This is a subject which is almost inexhaustible. We select this sample with tremendous accuracy, spending hundreds of thousands of dollars to do it. ARB selects a different sample every week. The laws of economics prevent them from doing it as accurately.

Mr. Cox. Would you feel—both in the publication of your reports and in the reports of other services, and then in the use of the results by your respective clients—there should be set forth, so that the public would know, the detailed method by which this result was obtained, together with this table of margin of error? So that at least the public, instead of being assured that they are getting an absolute—that it is gospel truth that this many people were watching "I Love Lucy"—will at least be advised that based on a sample of such and such a size, selected in this way, within these margins of error, there appears a likelihood that this many people were watching?

Mr. NIELSEN. Yes, and we set that forth in our books published every 2 weeks. We publish the figures for our services; we don't talk about the others; that is their job.

Mr. Cox. Is there any restriction, however, upon the way in which the information, once you give it to the client, is used by him. Is he as careful as you are in advising the public or the persons interested, who would be supposedly a little more knowledgeable than the public, that there are built-in qualifications to these results?

Mr. RAHMEL. I think there has been a tremendous increase in understanding of this sort of thing in the past 5 or 10 years. It has been progressive. Certainly sampling errors are well understood by

people expert in the use of audience research, and as Mr. Nielsen has mentioned, we have client service people who devote all of their time to helping clients interpret our findings. We do our utmost to avoid misinterpretation and misunderstanding.

Mr. NIELSEN. You can't prevent salesman from using share of the audience instead of rating, and a lot of that goes on, especially in the sale of local programs. The rating might be 10, for example, but if only half the homes have their sets turned on, the 10 percent rating is equivalent to a 20-percent share of the audience. Or they might use a cumulative figure. The local advertiser usually doesn't have research facilities of his own, and perhaps television is relatively unimportant to him. And he may be using a local agency lacking thorough television research facilities. Hence there is opportunity for misapplication of the figures. That is a problem yet to be solved. We think we have solved it rather well on the network service. Nobody buys $1 million to $5 million shows without analyzing the figures carefully and getting our interpretation. The networks, advertisers, and advertising agencies, before they buy, usually know what they are doing.

Mr. Cox. I understand from your testimony that you maintain the data on which your ratings are based, that it is available on request, and that you go to substantial lengths in making special surveys to answer questions that a client may have about the aspects of the services he buys.

Mr. NIELSEN. It is an important thing to the client to be able to get the figures cross analyzed in any way that he wants.

Senator MONRONEY. Is your service available to anybody who wishes to buy it?

Mr. NIELSEN. Yes.

Senator MONRONEY. Anybody could buy a tabulation on the popularity of the President's broadcasts over a period of time?

Mr. NIELSEN. That is right. Just don't try to get it for nothing. [Laughter.]

Mr. Cox. Could you send us one as a sample?

Mr. NIELSEN. We might.

Senator MONRONEY. Does anybody buy that service?

Mr. NIELSEN. We have a great many miscellaneous customers.

Mr. RAHMEL. We supplied by mail a complete client list about a year ago, and we can bring it up to date if you would like us to.

(The up-to-date client list is as follows:)

NTI CLIENT LIST

Allstate Insurance
American Broadcasting Co.
American Society of Composers, Authors & Publishers
American Telephone & Telephone Co.
American Weekly
N. W. Ayer & Son, Inc.
Ted Bates & Co.
Batten, Barton, Durstine & Osborn
Benton & Bowles, Inc.
The Borden Co.
John H. Breck
D. P. Brother & Co.
Buchanan & Co., Inc.
Leo Burnett Co., Inc.
Campbell-Ewald Co., Inc.
Campbell-Mithun
Campbell Soup Co.
Carter Products
Chrysler Corp.
Colgate-Palmolive Co.
Columbia Broadcasting Co.
Compton Advertising, Inc.
Cunningham & Walsh, Inc.
D'Arcy
Dancer-Fitzgerald-Sample, Inc.
Desilu Productions
Walt Disney Productions

NTI CLIENT LIST—Continued

Doherty, Clifford, Steers & Shenfield
E. I. DuPont de Nemours & Co., Inc.
Eastman Kodak Co.
Entertainment Products, Inc.
Erwin, Wasey, Ruthrauff & Ryan
Esso Standard Oil Co.
William Esty Co., Inc.
Foote, Cone & Belding
Ford Motor Co.
Fuller, Smith & Ross, Inc.
General Artists Corp.
General Electric Co.
General Mills, Inc.
Geyer Advertising, Inc.
Goodson-Todman Productions
Grant Advertising, Inc.
Grey Advertising Agency, Inc.
Guild Films Co.
H. J. Heinz Co.
Bryan Houston, Inc.
S. C. Johnson Co.
Kenyon & Eckhardt, Inc.
Ketchum, MacLeod & Grove, Inc.
Kudner Agency, Inc.
C. J. LaRoche & Co.
Lennen & Newell, Inc.
Lever Brothers Co.
Lewis-Howe Co.
Loew's, Inc.
Earle Ludgin & Co.
MacLaren Advertising
MacManus, John & Adams, Inc.
Madison Square Garden Corp.
Lester M. Malitz
J. M. Mathes, Inc.
Maxon, Inc.
MCA Artists
McCann-Erickson, Inc.
Miles Laboratories
William Morris Agency
Mutual Broadcasting System
National Biscuit Co.
National Broadcasting Co.
National Dairy Co.
Needham, Louis & Brorby, Inc.
The Nestle Co., Inc.
Norman, Craig & Kummel, Inc.
Office of Research, Inc.
Official Films, Inc.
Ogilvy, Benson & Mather, Inc.
Pet Milk Co.
Procter & Gamble Co.
Quaker Oats Co.
Radio Station CBL
Radio Station KSTP
Reach, McClinton & Co.
Knox Reeves Advertising, Inc.
RKO Teleradio Pictures, Inc.
James L. Saphier Agency, Inc.
Robert Saudek Associates
Jos. Schlitz Brewing Co.
Scott Paper Co.
Screen Gems, Inc.
Serutan Co. (Pharmaceuticals, Inc.)
The S.O.S. Co.
Sports Programs, Inc.
Street & Finney, Inc.
Sullivan, Stauffer, Colwell & Bayles
Sylvania Electric Products, Inc.
Tatham-Laird, Inc.
Television Bureau of Advertising
Television Programs of America, Inc.
This Week (magazine)
Time, Inc.
J. Walter Thompson Co.
Toni Co. (division of Gillette)
Trans-World Airlines, Inc.
Twentieth Century Fox TV Productions, Inc.
United States Borax and Chemical Corp.
United States Steel Corp.
Geoffrey Wade Advertising
Warner Brothers Pictures
Warner-Lambert Pharmaceutical
Warwick & Legler, Inc.
Westinghouse Electric Corp.
Wherry, Baker & Tilden
Young & Rubicam, Inc.
ZIV Television Programs, Inc.

Mr. Cox. If you would, please. Then we would like one sample of the smaller publication; not the big volume, but one sample of the other one.

Mr. NIELSEN. The other would give you a headache.

Senator MONRONEY. Thank you very much, Mr. Nielsen, for this very complete and informing presentation and the graphic charts.

The committee will stand in recess until 2:30.

(Whereupon, at 1:05 p.m., the committee adjourned to 2:30 p.m.)

AFTERNOON SESSION

Senator SCHOEPPEL. The committee will come to order.

James W. Seiler, you may proceed, sir.

STATEMENT OF JAMES W. SEILER, PRESIDENT, AMERICAN RESEARCH BUREAU, INC.

Mr. SEILER. I had an opening statement I wanted to make, but in view of the fact that Mr. Nielsen has covered the statistical aspects and some of the other special work that we do in our field, I think in the interest of time I would like to cut down on that.

Senator SCHOEPPEL. You may proceed, Mr. Seiler, in your own way. Your entire statement will be made a part of the record, and you handle it anyway you desire, sir.

Mr. SEILER. Fine.

(The full statement of Mr. Seiler is as follows:)

I certainly appreciate the opportunity to appear here today to discuss the subject of television audience measurement. No phase of the industry, in my opinion, is so little understood in relation to its importance as this one, and I am sure all of the major practitioners in the field are delighted that you have called upon us to supply the actual facts about our work and the uses to which it is put.

Under today's conditions, audience measurement in television is essential if the medium is to be supported by advertisers and if stations and networks wish to present the programs most desired by their viewers. Obviously, when literally hundreds of situations exist in important television markets across the country where programs are offered to an advertiser at approximately the same cost but where one program might have from 30 to 40 times the audience of the other, it is to the great interest of the advertiser to secure immediate information showing which program will deliver the most viewers per dollar spent. Furthermore, if certain programs are reaching only marginal audiences at high cost, it is usually of great value to the station to obtain this knowledge so that program changes may be considered.

It is difficult to dispute the above statement, and, in our opinion, most of the controversy about television ratings arises from the manner in which the information is secured. Due to the nature of broadcasting, no tangible circulation count is automatically available such as the newspapers, magazines, billboards, etc., have. Inasmuch as a complete census of all viewers in the Nation on a continuous basis is also impossible, some form of sampling, or selection of a small group of homes to represent the total, must be used to make our measurements. With today's scientific sampling techniques, it is quite possible to select just a few hundred homes in a very large population area, the measurement of which will provide an extremely close approximation of the behavior of all homes in that area. All of the practitioners in the field employ these sampling techniques, and all of us are constantly attempting to improve them.

A great deal of the misunderstanding about television ratings by people not fully acquainted with the field arises from lack of knowledge of the limitations of sampling and the tendency to compare two measurements made at different times or in different areas or by different techniques. As an example, in New York, on Sunday, May 25, the "Steve Allen" program presented the prize-winning pianist, Van Cliburn, and the program's rating that particular evening at the time of Van Cliburn's appearance according to ARB's findings was approximately double that of the rival Ed Sullivan offering. Just a few Sundays later, Ed Sullivan presented his "Tenth Anniversary" program, and in New York, according to ARB, secured better than four times the rating received by Steve Allen. Many of the competing rating services measure different weeks, and it has been our experience that if two services had presented the above results,

great cries of alarm would have echoed throughout the industry, when in reality both services would have presented a correct measurement. Another example is the frequent comparison of Trendex results versus the ARB or Nielsen national reports. Not only are these often made during different weeks of the month, but the Trendex service specifically limits itself to some 20 cities where each network has a local outlet, while the ARB and Nielsen studies are made from sampling covering every county in the United States.

Obviously, one would expect differences in television viewing to occur in different areas, just as political feelings are often different in different sections of the country; yet Trendex-ARB or Trendex-Nielsen comparisons are constantly being made, accompanied by cries for the reform of our industry. Actually, when only the areas measured by Trendex are tabulated from the ARB and Nielsen national reports, agreement among the services is quite close, and this, in our opinion, is generally true among all major services when legitimate comparisons are made. Unfortunately, the hundreds of cases of agreement among the services are hardly ever mentioned, whereas everyone hears about the few cases of disagreement.

Another built-in difficulty our industry faces is a psychological one and concerns the performer or other persons with a vested interest in a particular program that is shown by audience measurement to have attracted very few viewers. When this situation occurs, the performer or other party is faced with two choices, the first being to admit that the program does have a rather small audience. If he does not elect to do this, his only other choice is to claim that the rating is incorrect, and try to discredit it by any means available to him. All too many people in the television industry select this latter alternative and the result may be observed in dozens of newspapers and magazines across the country.

In making the above statement, I certainly do not wish to imply that the rating industry itself is blameless. All of us, in spite of severe economic limitations, are steadily improving the quality of our product and gaining more and more knowledge about this very complex task. We feel very strongly that the greatest service we can render to the television industry is to present the most accurate and complete audience measurement figures it is possible to procure. We are proud of what we have accomplished to date, and with the development of newer and more advanced techniques such as ARB's new electronic Arbitron, we look forward to an era of even greater service and better understanding in this vital television field.

Mr. SEILER. I would like to say just a few words about what the position of ARB in the industry is, as we see it. The Nielsen Co. and Trendex Co. primarily produce services for networks and measure network programs. The bulk of ARB's work, in terms of actual number of homes measured and reports issued, is in the local field. We do a complete national, which is drawn similar to the Nielsen one, from every county in the United States, and done by similar sampling techniques; and in addition we produce reports on somewhat smaller samples, varying from 200 to 600, in about 150 local markets. We would have one, for example in Wichita Falls, in Los Angeles, Seattle, Rochester, and so on.

Mr. COX. How many would you use in Seattle?

Mr. SEILER. I would say around 340 homes.

Now, the technique we use, and of which we are very proud, is what we call the interviewer-supervised viewer diary. We are, with one exception that I will point out in a minute, an operation devoted completely to the development and use of the viewer diary. We are very proud of it. We feel that it can do a fine job in the industry, and we make no apologies for it.

Every time I speak of our sample size—and this is different from what you find from other sources—I am referring to the number of diaries we get back from homes and use in our tabulation. This is shown in the front of each one of our reports, and because a great

number of the families in the original sample either return an incomplete diary or refuse to cooperate, there is sometimes a difference in the number you get back and the number you originally placed. We feel it is better, in speaking of our sample sizes, only to discuss what we actually got back and used to make up these figures, and this is what I plan to do.

Mr. Cox. Do you put out a sufficient number to make allowance for this loss and still retain an adequate sample?

Mr. SEILER. That is correct. In Seattle, for example, we might originally put out 500—I don't know the exact figure, because the rate of return does vary somewhat in different markets. Now, obviously, we can't issue a service commercially if we haven't got pretty good evidence that the diaries we do get back furnish information that is similar to what we would have had if we had gotten returns from everyone; because if the people who did not return diaries are different in their viewing habits from the ones who do, obviously we have a biased sample in our return and couldn't operate commercially.

Mr. Cox. Do you have some who refused to accept the diary in the first place?

Mr. SEILER. Yes.

Mr. Cox. Do they represent a different category?

Mr. SEILER. They are lumped together with the people from whom we do not get a diary, but who were originally chosen in our sample. I might mention the way we check this, because I know the question is going to come up. In any type of diary operation, as Mr. Nielsen pointed out, very serious questions arise about the accuracy of the information you get. You might feel that the housewife, for example, doesn't enter all of her viewing in the daytime because she is afraid her husband will see it at night and feel she has wasted her day watching television. There is some question of whether children are capable of filling in the viewing that they do, and there are a number of other questions about a diary operation—whether or not the people who do not return them are different from the ones who do, and things like that.

Mr. Cox. Are your instructions to the keepers of the diary that the entries are to be made by the person who viewed the program, or by some one person in the house?

Mr. SEILER. Actually, we are a little bit liberal in that instruction. We want the entry for each program made by the person best qualified to make it, who best knows at that time what went on; and a tremendous number of our diaries are filled with all different types of handwriting. But I would like to make one comment on the whole diary accuracy problem—because this has been one we have had to face ever since we went into existence—and that is that the best way of finding out whether any of these things occur to bias diary results is, when you are making a diary measurement, to make a similar measurement in the same area in the matched sample with an entirely different technique that isn't subject to any of these things, and then see if the two agree.

Mr. Cox. Would that be by telephone?

Mr. SEILER. We have used telephone coincidental for this up to now, and in some cases have used what we call personal coincidental, where the interviewer unexpectedly bursts into the home and looks at the set. We do these experiments about once a year. One of our

largest ones, which I think we furnished to you, was made on approximately 100,000 coincidental telephone interviews in eight areas in the country, and those were matched homes to homes that were keeping diaries; and we checked the actual viewing, as determined by the telephone call at the instant it was made, against what the diaries in the parallel homes later showed, and we correlated it program by program. And again our feeling was this: That if any of these things that we suspect about the diary did apply—if certain people don't keep them properly, if they are people who don't cooperate, or are different from the ones who do, or if any other biases enter into it—then these have to cause some difference in what the diary shows you regarding the area's viewing, as opposed to what the telephone coincidental would show, which is not subject to any of these. The results of this are contained in this booklet, and we do this as a normal course almost every year, and I think almost everyone who utilizes diaries does.

I think Mr. Nielsen checks his basically the same way. Our conclusion is that the diary has so many advantages in the industry—it allows you to rotate your sample, use a different one each time, which, of course, builds hundreds of thousands of cases for you, instead of limiting you to one small group of people that you measure over and over again. And it allows you to use much larger samples, sometimes 100 times as big as you might otherwise; and it allows you to get the identity of the person doing the viewing; and it also allows you, as we have done in these diaries, to get, after each entry, the family's opinion of the program.

We produced an AA rating, an audience appeal rating, which tabulated what the families thought of these programs as they viewed them; we had them check "excellent," "good," "fair," and "poor." "Excellent" we counted as 100, down to "poor," 25, and computed what we called an appeal rating from this.

Mr. Cox. Now, do you suggest there is some deficiency in having a fixed sample?

Mr. SEILER. I think each type has its advantages. With the fixed sample, you are limited to measuring the same homes over and over again; and if they are good in the first place, I don't feel that this introduces too many problems. But of course, you never know how good they are in the first place; and you have difficulty in matching your replacements in a fixed sample, so that your sample still is as good as it originally was.

On the other hand, the fixed sample will allow you to spot trends over a period of months, because you are measuring the same homes. The rotating sample, where you choose an entirely different group each time, destroys your ability to get a lot of these trends; because when you get a difference there, you don't know whether it is due to the slightly different sample, or a difference in behavior. But on the other hand, if you hit this 1 time in 20, when your sample goes completely out of whack, the next time you choose your new sample, on your changing sample, you wash it right out.

If you average the reports over the year, you have 12 times the sample you would have in any 1 month.

I think there are advantages on both sides.

Mr. Cox. You say your sample goes completely out of whack. Do you mean you get a markedly different set of ratings with one sample as compared to the preceding sample, where there has been no change, basically, in the programing?

Mr. SEILER. Sampling, as I think Mr. Nielsen explained, is based on certain laws of statistics; and he was giving you the figures for one, two, and three standard deviations. One standard deviation, I believe, is correct 68 times out of 100, within certain limits; with two it is, I believe, 95 times out of 100; and with three, it is 99 times out of 100. But what this means, if you are working on two standard deviations, is that 95 times out of 100, or 19 times out of 20, you are going to be within these limits that he mentioned; but the other 5 times out of 100, or 1 time out of 20, you will go completely beyond this.

In many ways it is similar to trying a perfectly balanced roulette wheel, where you have a 50–50 chance that the black or the red will come up. Normally, in play after play, this averages out; you may get two blacks, then a red, then another black, and then a couple of reds. But one or two times an evening you will stand there and watch 19 blacks in a row come up, or 10 blacks in a row, or eight reds in a row. And this same thing happens in sampling. One time in twenty, assuming a theoretically perfect sample, you can go completely out of line; and this is something that I think isn't well enough understood in our industry. And it is one of the biggest arguments for never believing any rating fully until you see it twice.

We have even gone so far as to issue a little wheel which we have distributed over the industry. I think we sent you one. This shows, at any rating level with the different samples, what the level of confidence should be; and all of us are dealing with samples in which we can only approximate the rating. We can tell you it is somewhere between a 9 and 11, or between an 18 and a 22; and that the other fellow's program is between a 5 and an 8. And we can establish areas of program audience and furnish information which, in our opinion, should only narrow the field in which the good judgment of the people in the television industry should then operate.

Mr. Cox. Why don't you publish it in that form, instead of publishing at the absolute median, which permits more easily than if you publish within two ranges—permits use by the salesmen of the station, or distortion by someone concerned with the further use of this data?

Mr. SEILER. We have attempted to do that, and the result was almost disastrous. It was shocking to a lot of people; a lot of them just threw their hands in the air, and didn't feel that they could work with this type of thing. It has a very practical disadvantage, too. That is, when you are averaging figures for several months with completely changing samples, your deviation keeps narrowing—you get more and more accurate as you put the different months together; and if we don't give you the exact figure we got from the sampling, then you would be unable to do this averaging properly. What we finally compromised on was distributing this wheel, and distributing tables, so that for each rating we issue you can see the level of confidence; and if the change is less than indicated here, our advice to our clients is that they should disregard it.

Mr. Cox. In other words, the fact that the show is now down two points from where it was last time—if that falls within the boundaries shown on your wheel—should be disregarded?

Mr. SEILER. It is utterly meaningless. In our opinion, it should be completely disregarded, and this is the basis of a lot of the difficulty that we have in this industry. People aren't aware of the real significance of sampling deviation. Properly chosen samples are remarkable in what they can do, but they do have limitations; and if you take two identical samples, identically chosen, and completely parallel, and measure a program, one is likely to produce a 19 for you and the other is likely to produce a 23. And those two, under normal sampling conditions, would be, in our opinion, identical—but they certainly aren't in the way that they are treated by the industry.

One of our big problems, we think, in this field, is to help overcome that.

Mr. Cox. Now, is this only true as you move from one sample to another in two different periods, or could you have this margin of error as applied to the contemporaneous ratings of two programs? In other words, suppose you have one program which comes up with a rating of 28 and another with a rating of 32?

Mr. SEILER. With the same sample, that would still apply.

Mr. Cox. In other words, you really can't tell which of those was on top in viewing and which was not?

Mr. SEILER. If it was within this limit, that difference would be meaningless, in our opinion.

Mr. Cox. Is that true as applies to the national rating?

Mr. SEILER. Yes.

Mr. Cox. So if Ed Sullivan beats Steve Allen by 4 percentage points, he hasn't beaten him, perhaps?

Mr. SEILER. That is right, and this, in my personal opinion, this difference, when one program shades another by one, two, or three points, is ridiculous, because no sampling technique is equipped to measure in that fashion. We can make very useful and valuable measurements within a very few percentage points, and, as I say, we can tell you that your rating is somewhere between a 28 and a 32, and the other person's is somewhere between a 7 and 9, and you can see the relationship of the two programs; but when you try and say that one man's program with a 29 is better than the other man's with a 28, on the same survey, this is completely meaningless.

Mr. Cox. We had a communication in which attention was called to a week in which the Top 10 was led by the "$64,000 Question," with a rating, on a unidentified service, of 45.6. Then there was a substantial drop down to "The Best of Groucho," in second place at 33.0; and "Disneyland" followed with 30.9"; and "Burns and Allen" was in 10th place with 20.

Now, this particular individual interpreted this as meaning that possibly the 10th-rated show actually had a larger audience than the 2d-rated show. Are the groupings on a national measurement of top programs—where you are only taking 10 out of the entire network lineup—are those groupings sometimes close enough that you can get that much leeway? That actually, in a close week, the man in 10th place may have been as good or better than the man listed in 2d place?

Mr. SEILER. Yes, sir; and if you have a very small difference between the 1st one and the 10th one, this can easily happen. Say it is only two or three points—as I say, there are many cases where if you have that small a difference, you can just reverse the group, and your measurement is just as valid. But what you really have found in your measurement there is that there are 10 programs, all of which have audiences within the same general range, and they are to all intents and purposes identical; and they should be compared with programs with perhaps half that audience, or two-thirds.

Mr. COX. Perhaps it would be more sensible to list them as tied—to announce that as far as is definitely ascertainable, these programs have roughly equivalent audience pull.

Mr. SEILER. I would like to see that, and I want you to know that our company is attempting to bring about a more realistic use of this data derived from sampling.

However, I would like to say one other thing along those lines. We have problems in interpreting our data to the industry, because we do get it by sampling; but we haven't got, I think, the large problem that the public generally thinks we have. In the early days of television, there were a lot of discrepancies pointed out between the different rating services. There are still some pointed out today, but in my opinion, taking only the national services again—and I am including here ARB, Nielsen's National, and Trendex, which isn't a complete national but is a competitive area of measurement—there is very little difference today between the three services.

I think some differences were pointed out here this morning, but they dated back to 1953 when all services were using just partial samples, and all of us were getting organized. But as of today, all three networks state to us that there is no problem as far as they are concerned, to speak of, on agreement between these three services; that they all state basically the same thing. And if you take the Nielsen National and the ARB National, I would say 9 times out of 10 you will get exactly the same story if you compare the same weeks; and if you tabulate out of those 2 services just the area that Trendex measures, which I think is some 20 competitive cities, then you again will get agreement. My personal opinion is that the correlation in all of these cases will be over 90 percent, and much of the confusion arises when people compare things that simply shouldn't be compared.

For example, I think in my statement I brought out the fact that a lot of comment is created by the different ratings that services get on the "Ed Sullivan Show" versus "Steve Allen." You read about it all the time. We have made measurements every week, and we measured a few weeks ago Allen and Sullivan when Allen had Van Cliburn, the pianist, on. At 8:45, when Van Cliburn came on, over twice as many homes were watching "Steve Allen"—30 as opposed to 16, I think it was. On the other hand, this last Sunday we were measuring the same area. Ed Sullivan had his "10th Anniversary" program, and apparently there was not too much on "Steve Allen"; and this time the Sullivan rating was something like five times the size of the Allen rating.

Now, most of the services do measure different weeks of the month, and some of them average the 4 weeks together; and when you compare the Sullivan and Allen ratings made by someone who has aver-

aged the 4 weeks together, versus someone who measured the first week of the month, versus someone who measured the second week of the month, you are just asking for trouble, because you are going to get completely different pictures, as we did in these two cases these two different Sundays. This causes a tremendous amount of our difficulty, and, of course, it represents not a defect in the service but a misuse of it.

Mr. Cox. Would this represent an explanation of the statement contained in the Time magazine article which Senator Monroney quoted this morning, commenting on sponsor changes in network programs in 1956? The author refers to this complaint of the different, contradictory results from different services and uses as an example, not involving your service, the Nielsen-rated "Fireside Theater" as falling from 27.5 to 23 from one month to the next, while Trendex showed it rising from 18.5 to 27? Is this because Trendex rated 1 week in each month and Nielsen used an average of 4 weeks of the 2 months, or what would be your explanation of that?

Mr. SEILER. I would say this: First of all, it probably is not a valid comparison, because it is undoubtedly true that the weeks had to be different there, with the two services. And we would have to look at what was opposite "Fireside Theater" in each case. There may have been a spectacular in one of the weeks. Secondly, Trendex is measuring just the city zones of a 20-city area. It performs a very valuable service. It is an attempt to make a measurement only in areas where all three networks have an equal opportunity of being seen, three-station markets. The Nielsen service, on the other hand, and our national, is a measurement of every county in the United States, including rural, village, town, the west coast, and everything else. If the Trendex rating—a 20-city one mostly in the East—is being compared with a Nielsen national, which brings in the rural and all the other sections of the country that are left out of Trendex, it might well show something entirely different. What you would have to do to begin to get to the heart of the matter is get those two on the same week; then take only the part of the Nielsen sample that is in those Trendex cities, and compare the two then.

Now, when that has been done, I would say in 99 cases out of 100 you would have no problem, and this is what we face in the press and in the industry; and it is not a real problem, in my opinion, today.

Mr. Cox. We have an ad in "Broadcasting" for June 16 of this year for a Washington television station quoting your April 8 to 14 survey, and stating that—perhaps choosing favorable hours, noon to 10 p.m., Monday to Friday—it ranks 31.7; the second station, 29.3; the third station, 24.7. Now, does that actually reflect a significant dominance on the part of that first-place station, at least as related to the second-place station?

Mr. SEILER. I would have to check the tables and see, because this is an average of a measurement for the whole week, and I don't know what our sample size was on that. That is the overall share of audience for those periods, and I would say it could and it couldn't. I would have to check and see.

Mr. Cox. Another form of advertising commonly used by stations is to compare their ratings for 15-minute segments and to advertise the number in which they were tied or were first. Now, if in each instance their margin on that segment was within these areas of toler-

ance, the fact that they can claim to be first in 30 out of 40 quarter hours might not, then, establish the kind of dominance that 75 percent priority would seem to indicate, is that correct?

Mr. SEILER. That I think is partially correct. There is more there than meets the eye, and I think we are getting into some advanced statistics; because if in each case the leading station had an edge over the other station, and the difference in a single case wasn't significant—yet if in every case the leading station was a little bit above, and this didn't go through the reporting in both directions (by accumulating these cases, you are helping your sample somewhat), you would need a very complex statistical formula to really tell, there, and I would say that we are way over our heads—I am over my head in statistics in trying to tell you right off the bat whether that would be significant or not. But in many cases I will say that it is possible that a station can lead in quarter-hour firsts and state it in such a way that they are really not any better than the second station, or only a slight amount better; and this is a problem which we are trying to police in the industry ourselves.

If stations make statements in our opinion too flagrant, or represent misuse of our information, we withdraw service from them unless they discontinue it. We, in effect, send them a cease and desist letter.

Mr. Cox. Have you done that?

Mr. SEILER. Oh, yes. We are honestly trying to bring about better usage of this material in the industry; and we are also trying to improve our own shortcomings, because we are far from perfect. We have a lot of research problems that I think we are gradually overcoming; and all of us in the industry, we feel it is to our own self-interest to create as much confidence in our work as we possibly can. I think that both we and our clients will be a lot better off if we pursue this course, and this is what we are trying to do.

Mr. Cox. On the national, as distinguished from your local ratings, you indicated in your reply to Senator Magnuson's letter that you use a sample of from 1,600 to 1,850 out of a base sample of 2,200. Now, does that indicate that one week you will have 1,600 usable replies and in another week you will have 1,850 usable replies; that you get that much variation in the useful return on the diaries that are put out; or what is the variation there?

Mr. SEILER. I think we gave you the extremes on it, but it would be quite possible, if you took all months of the year, that you would get variations that big between the highest and the lowest month, yes.

Mr. Cox. Now, what would be the local sample for that, just to keep the figures equal, for Seattle? You said for a local rating in Seattle you would use 340.

Mr. SEILER. Approximately.

Mr. Cox. How many of your 2,200 base-sample diaries would be placed in Seattle for the national measurement?

Mr. SEILER. Only the number that would normally turn up in Seattle in a probability sampling operation, and if Seattle happens to have 1 percent of all the TV homes in the United States, 1 percent of these 1,800 would be in Seattle. We would by no means use the whole Seattle local sample.

Mr. Cox. Having determined that you will use this apportionment based on the percentage of television homes in the given market, how

do you determine, or what is your basis for selection of the sample within that area? If it is 50, how do you pick the 50 homes where you will place diaries in Seattle?

Mr. SEILER. In the city of Seattle right now we would select them from a random number system pattern through the telephone directory; and the reason we do this is we have determined to our satisfaction that homes having television tend to have a very high number of telephones. In other words, most of them are in the phone book, and your best possible way of selecting the best possible kind of probability sample is to have a prelisting that gives every home in your universe. Your feeling is that the phone directory, even though we sacrifice a few nonphone homes, comes closest to this. This is almost the same as being able to take all the homes in the area, mix them up completely, and draw them—which is the theoretically perfect way of selecting the sample.

Mr. COX. Isn't that contrary to the recommendations of the Advertising Research Council, which indicated that preferably you should measure all homes, regardless of whether they had telephones or not, or were listed or not—and whether they were in the metropolitan area, and therefore in the Seattle phone book, or the Bellevue phone book, across the lake? Now, how do you make adjustments for the concentration—both areawise and possibly in terms of economics—that you get by ignoring either nonphone homes in Seattle, or telephone homes outside of Seattle?

Mr. SEILER. First of all, we have determined by our own tests that the difference in television viewing between nonphone homes and telephone homes is not great enough to make any really significant difference in our results, if we leave them out—considering the fact that there are so few of them among television homes, because television homes have more telephones than non-TV homes. Our feeling here is that we have chosen, in a way, the lesser of two evils. If we go to a method of sampling which allows us to include the nontelephone homes, this means a complete prelisting of homes by personal interview. We have to send people to every home in the city, and in effect make our own directory, then make our selection; and this would mean the cost of our surveys would go up to where no station could afford them on a local basis—and also the sample size would go down, because of the high cost of going out and doing all this personal enumeration.

Our feeling is that if we can use this money that we save in much larger samples, better reporting, and more frequent service, that probably the stations are better off. We are able to demonstrate that missing the nonphone homes—which is the only thing your using the telephone directory does—would not make a significant difference.

Mr. COX. How about the rural area?

Mr. SEILER. The rural, of course, is covered completely in our national, but we were speaking of our Seattle local report, which is just the city of Seattle.

Mr. COX. You would not undertake to measure the whole service area of the Seattle stations?

Mr. SEILER. We might on special order, but in our normal city reports we only measure what is commonly called the metropolitan area of the city. In Washington here, it would be the five counties;

and we are attempting there to limit it to an area of equal opportunity for the stations, so we can see what the competitive effect of the programing is.

Now, we have another type of study which we call the total television area, which we do infrequently in our markets. That goes out and covers the entire television area, and includes farm homes and everything else.

Mr. Cox. Is that only on special order?

Mr. SEILER. It is only on special order; it is tremendously expensive, and very few stations actually purchase it, because 9 out of 10 are satisfied with the metropolitan area report.

Now, our national is quite a different thing. That does cover completely the rural and urban areas in their proper proportions; and there is no bias in the national because of that.

Mr. Cox. Now, we have been told of 1 situation where you distributed some 200 diaries in a particular market, and 3 of them were allegedly found in the same block in families of the same economic bracket. Do you have any method of adjusting after you made your random sample, or do you stay with that sample regardless of where this indicates you are to place the diaries?

Mr. SEILER. When you take a pure random sample, you have to stick with what it gives you, because there is no way you know how to substitute. For example, let us say that we took a pure random sample and drew it—or a probability sample, which is another word for the same thing—and we found two homes that had turned up right next door to each other, and decided that we had better move on down. The minute you start tampering with that probability selection you get into trouble, because there are so many things that influence television viewing that you don't know anything about—we don't, or anybody doesn't.

For example, we might try and substitute another home that has equal economic status, or an equal number of children, or equal educational status; but the minute you do that you ignore the other factors such as the state of a person's health, which has a tremendous influence on the amount of viewing they do, the person's social life—people who are out a lot do less viewing than ones at home a lot—and there are so many other factors that influence television viewing you simply don't know them all. If a home has been selected in a probability sample in connection with several hundred others forming a complete measurement universe for you, any attempt to tamper with that and make arbitrary substitutions on what you think they ought to be is just asking for trouble. My answer to your question would be that if such a thing turned up in a properly drawn probability sample, this is what we would measure.

I have never heard of this happening to us; this is new to me.

Mr. Cox. I found out after the session this morning that I had an erroneous and unscientific view of a random sample. This probability sample you take is not my original idea that you throw the book open, close your eyes, and stab. You have some previously determined set of numbers, or something, which dictates—you use one set this time, and that gives you certain names in the phone book. The next time you use another very carefully determined—not random at all—method of selection. is that correct?

Mr. SEILER. Well, a pure random sample would be the most carefully determined one you could get. By pure random we mean setting up a situation for choice where every single home in your path has an absolutely equal chance of being selected. Now, for example, if we picked all our homes from just the first half of the directory, this would not be a proper sample. You have to, each time the drawing is made, be sure that every home in that directory—or if you put them all in capsules, and in a big barrel—has its equal chance of being picked so that these laws of probability can operate. It then works the same way, actually, as a roulette wheel works.

Mr. COX. Are these sample selected locally, or do you select them here, using the local phone book, and then direct your field people where they are to place the diaries?

Mr. SEILER. I belive that now the instructions for selection are sent to our supervisors. We have a field supervisor and interviewers in each of our cities. But I would like to ask Ann Zanes that.

Mrs. ZANES. The supervisors in the local areas select the sample, according to the instructions that we give them.

Mr. COX. That is, you send them the random arrangement?

Mrs. ZANES. Right. The only alternative would be if we have—sometimes in these total area samples, we interview in areas where we do not have a supervisor. We might have to make several contracts. Then we may get the telephone directory, pick them out, and notify the nearest supervisor, who would then carry on from there.

Mr. SEILER. Actually the sampling problem is a very interesting one, because the thing that is spoken of as a random sample doesn't in any way mean a carelessly drawn sample. A pure random sample I would settle for any day in the week, because it is the best thing you can get. It can be modified some.

For example, if we had every home in the country in a little separate capsule, and we could mix all of these 50 million homes up and make a blindfold selection, we would end up with a wonderful sample of the United States; and probably if we compared our results State by State they would be almost exact. But we could make that a little bit better by using two barrels, separating these into the East and the West, and getting the number that we know from Census reports are in the East and West—then making a random selection of these subgroups. This would help us a little bit more, and there are other techniques that will even improve on what I have just described.

These I think all of us in the industry are on top of, and we are trying to get the best samples and to measure them in the best way that the laws of economics and our own abilities permit. We do have a limitation in what the stations can pay for these services.

Mr. COX. You mentioned a while ago a difficulty, in Nielsen's arrangements, in matching to replace a member of the fixed panel, yet at the same time when you are checking some of your conclusions, you talk about a matched home.

Mr. SEILER. A matched sample, yes.

Mr. COX. A matched sample. Aren't you faced with the same problem there that he has in matching this part of a sample, or do you simply proceed from the beginning with a new random arrangement and come up with another random selection based on the same principles as the first?

Mr. SEILER. That is the difference between the two. We are not faced with the problem of having a complete random sample which properly reflects the characteristics of a whole area, and then having to replace a home or two. We retain that sample and make our measurement; and then, using the same process, we draw a whole new one. And that new one, of course, is complete in itself. It has all of the characteristics, and every home in it was drawn from the original probability design, and that is satisfactory. You don't have the problem there. It is only when you substitute some of the homes in a sample you have already got, and put some different ones in, that you run into these difficulties.

Now, we have this same problem in the larger cities where, as you may know, we are setting up in our national and in New York, Chicago, and Los Angeles, a new automatic instantaneous measurement system. With this system we are forced to use a fixed sample simply because it is too expensive to keep changing these electronic units from home to home. We have pioneered this and begun it, actually, in New York. We are not up to our full sample, and therefore we are not selling it; but we are printing reports in New York now on an experimental basis.

Mr. COX. The difference between that and Mr. Nielsen's system is that you carry the electronic symbols not just to a film, but over a telephone line to your headquarters—in the way that he illustrated on the operation he maintains in Chicago?

Mr. SEILER. Right. Actually, this has been the dream of the television industry for 15 years, and all of us have had these devices from time to time. The difficulty up to now in most of them has been that each required a line coming in from the individual home into a central point, and into a computer. I believe that the price for leased lines in New York is $8.50 per month per mile, and if you use a sample of 300 on that basis in New York, or most other cities, your line charges will be about $40,000 a month. The real breakthrough which made our new system, which we call "Arbitron," practical and allowed us to put it into operation instead of using a pilot test, is the fact that we developed a device which transmits from each home at a different frequency, and this allows us to select a sample of 300 random homes in New York and theoretically use only 1 line, which simply passes through all of those homes into our computer. And because each little electronic unit in the TV set is transmitting on a different frequency, we can use one line and get all the information into the computer.

In New York we actually use 12 lines, with from 20 to 30 on a line, which drops the line rental from $40,000 to about $4,000 a month. This method, in New York and probably in a few other large cities—and the national—will make this practical. As a matter of fact, I don't plan to distribute these, but here is our Arbitron report from last night in New York. [Passing copies.] These are the programs that were on last night, fully rated. This all came out of the computer, and these are available—these results are available even before the program is over.

Now, this in our opinion will probably not represent the huge step forward in accuracy that people anticipate. My frank opinion is that this will show results similar to what the diary has been showing.

There won't be that much difference, but it will have the advantage, in these large markets, of providing a measurement of every minute of the month instead of 1 week. Also it will provide the information instantaneously, instead of having a 4- to 5-week lag; and it will allow the accumulation of a lot more trend data, because instead of waiting a month for 1 rating on a program, by the end of the month you will have perhaps 20 or 30 ratings, if it is a Monday to Friday show.

In this particular sample, we do maintain a fixed sample, and we have the substitution problem. One of the big reasons that we have a fixed sample, and I think certain others do, is that with any kind of electronic equipment it is too darned expensive to change it every time. I would prefer to have these in different homes every month, under certain circumstances, but it would just be out of the question to do it. As I say, a fixed sample does have a lot of advantages that we would otherwise hear, but it also has disadvantages.

Mr. Cox. The other user of diaries uses the same sample for 7 weeks, but does not use the diary the first week, using it only for the 6 succeeding weeks. Now, does this indicate some lack of confidence in the accuracy with which the thing will be kept the first week—which, as I understand it, would be the only length of time that your diary would be in use?

Mr. SEILER. That is correct.

Mr. Cox. Do you have any feeling as to whether this may result in lack of reliability?

Mr. SEILER. I am not well enough acquainted with the other diary operation to say in that case, but I do know in our case all of our tests that I have described, both the personal coincidental and the telephone coincidental tests, have been made on the basis of our first week diary, and we get an almost fantastic correlation between the two. If anything were wrong with the first week diary, in our opinion you would not get this agreement; and actually if we ever had an indication that anything was wrong with the first week diary we wouldn't be marketing it because I think it would be a disservice to the industry.

Mr. Cox. Another broadcaster reports that he thinks he can establish several instances where the housewife waited until the end of the week to fill out diaries, and did so from memory—aided by a program listing for the week. Is that entirely possible under your system?

Mr. SEILER. I would say it is. In a few cases we interview during the week in these homes; we have followup checks to make certain that the diary is being kept concurrently, and we attempt to edit out ones that are kept late. In other words, by our interviewing we are doing, in effect, the same as Mr. Nielsen is doing with his little clock arrangement where they write in the reading on the clock.

Mr. Cox. Do you do that only on the national?

Mr. SEILER. Every local city and the national. We, to my knowledge, do it in every single market we are in, and in our national.

Mr. Cox. That would require a substantial staff. Do you move the people from community to community for that purpose?

Mr. SEILER. Our field staff alone numbers in excess of 2,000 people across the country, and it does require a lot of people.

Mr. Cox. Is this full-time employment for them?

Mr. SEILER. No, only during survey periods. In many cases where we survey 1 week in a month, these people may perhaps work for Gallup another one of the weeks; but we do maintain them, and we attempt to weed out as many of these diaries as possible that have been filled in late. Also we attempt, by interviewing, to make sure that the families understand that the only value to us will be if they keep it as they go along.

Mr. Cox. Isn't there in this situation not only danger of failure of memory, but some chance that in making the record they will put down what they think they should have seen, what is called prestige bias, or something of that sort?

Mr. SEILER. I don't believe that. If this were happening, when we make our coincidental checks, the coincidental would then show something different than the diary, and our national would then show something substantially different from the Nielsen national, or our 20 city breakout would show something substantially different from Trendex which is a telephone company incidentally—and it doesn't. This is the way I think it should be attacked. If any of these things happen, then you are likely to get a different result from the diary that you get if you burst in on these people and looked at their set; and my feeling is backed up by all of our evidence that this is just not happening. Therefore, if we have a few diaries that are filled in at the end of the week, either they are too few to make a difference, or the persons have remarkable memories. I don't know, but I do know that when you make parallel measurement with different techniques that you get very, very close correlation.

Mr. Cox. We inserted in the record this morning a rating by TPI Ratings, Inc., in Syracuse, which used this personal coincidental and compared it, I believe, to a telephone coincidental which they conducted on a matched sample, and they got substantially different results.

Now, you say you would at the same time by use of these different methods get similar conclusions.

Mr. SEILER. I have only partial information on that, but I think if you will check it, you will find those weren't even done the same month, let alone the same week.

Mr. Cox. I think the comparison made to your ratings was in a different month. In other words, ARB rated Syracuse in February, and this TPI rating was made on the 9th, 11th, 13th of March. My understanding of the system employed was that, using a matched probability sample, the overall sample was diveded equally so that 50 percent of all interviews were on a personal coincidental basis and 50 percent on a telephone coincidental basis—and this was done simultaneously. They got a rating for "Omnibus" at 4 o'clock on Sunday afternoon of 18.5, using the personal coincidental method, and a rating of 17.1 on the telephone coincidental. There was a substantial difference between these and your diary rating, but as you say, that was a month away.

Mr. SEILER. There may have been a football game opposite on the Sunday we measured, or something like that. You would really have to have more evidence, because this is just the type of thing that is very hard to track down. My statement again stands that if you take

information from a well-run personal or telephone coincidental, a well-run meter, and a well-run diary, and you measure the same area at the same time, you will get substantially the same result 9 times out of 10.

Mr. Cox. They found a more marked difference in reports of sets in use. In other words, in the period 4 to 4:30 on Sunday, personal interviews showed 28.8 and telephone interviews 36.8—a difference of 12 percentage points—and your diary for the preceding month showed 40.9.

They have explanations, some of which I don't understand. But here is an application, coincidentally, of these two methods which produces some difference in ratings, more substantial differences in sets in use, and I think also some marked differences in audience composition.

Mr. SEILER. I have two Arbitron reports here from two different Sundays—I believe they were Sundays in New York just a week apart—and these were from the same electronic devices in the same homes, the same everything. On one of those Sundays it was rainy and cold, you almost couldn't go out in the streets; and on the next Sunday the weather was fairly good. And I have sets in use on one Sunday over twice as high during the same hours as on the other Sunday and that is just a week apart.

I really don't feel I should comment too much on comparisons made a month apart, between April and May, or sometimes March and April, in certain cities. As summer viewing begins you get a tremendous drop in sets in use; a tremendous jump in October over September. These comparisons, I think, in different months, in different weeks, are what account for a lot of the difficulty that we are in; and I maintain that valid comparisons will not show this 9 times out of 10.

Going back to the fact that we all make mistakes on occasion, and that the laws of sampling occasionally betray us this 1 time out of 20, we will have even in valid comparisons these huge differences.

The only solution would be simply not to believe it until you see it twice, because the next measurement would tend to wash out the sampling difficulties; and our advice to clients, if they see an unusual shift in a rating, is not to take too much stock in it until the next report is made. If the next one continues to show that, then the chances are all in favor of its being valid; if the next measurement brings it back to what the average overall was, it may be regarded as an unexplained fluctuation, due, perhaps, to a rainstorm that night or an unusual sampling fluctuation. That is the way that you have to operate with sampling, and our feeling is that if more people in the industry used our material this way, that both the industry and we would be a lot better off.

Mr. Cox. Where is the material in the diaries tabulated? Is this done in the region, or sent to your offices here?

Mr. SEILER. We have our own building, our headquarters, located in Beltsville, Md., and that is what we call our national research center. All of our tabulation is out there. I would say we have some 200 people there. Everything comes in and is tabulated here in Washington.

Mr. Cox. Is this done manually, a reading of the diary and a tabulating of the results?

Mr. SEILER. Yes, and some of our work, especially on the national, is done with IBM equipment. We have done cost analyses in each case, and in some cases we are better off with hand, and in some cases better off with machine.

Now, we have other operations in New York, Chicago, and Los Angeles, but except for the Arbitron operation, these are mostly sales and servicing offices. All of the production is done here in Washington.

Mr. COX. Now, after you have eliminated certain diaries because they are not usable, do you then report the exact figure which you get after this tabulation, or do you then consider whether adjustments are necessary in the light of previous ratings?

Mr. SEILER. I am glad you asked that, because one of our strongest feelings is that if you do not get the proper information in the home at the time the viewing is going on—if you miss it there and get wrong information there, no number of mathematical formulas are going to give it back to you in your shop. Every effort is bent on getting an accurate and complete report of the viewing in the diary while it is in the home, and once we get the diary, that is tabulated just as it is, and the results are shown with no type of adjustment whatever, except one very slight one that we make. There may be certain homes in our sample, for example, that are away on vacation, and who should be counted, because those homes are part of the sample—and obviously are not doing any viewing.

Our interviewers, if they are unable to contact the homes the day before the diary is due to start, continue contacing them twice a day all during the diary week. If they can determine, in the case of some of these homes, that the family was away, and that no one was home the entire week, then information is added to our return from that city showing that those homes did no viewing; and a portion of those, in proportion to the amount of our return of the usable diaries, are added in as nonviewers. This amounts maybe to seven or eight diaries, or something like that, just as an estimate.

But aside from that, we have a very strong feeling that you can't caluculate mathematically what these people should have put in their diaries, when they left it out. It just can't be done, and we are completely opposed to it.

Mr. COX. I suppose that in many multistation markets, you do not sell your local service to all stations; and then this leads, I suppose inevitably, to the suggestion that the one who buys it gets a preferred rating. Can you document, based on your past experience, in situations where this exists, situations in which those who do subscribe to the service come up with a substantially inferior position—that is where the mere relation of buyer and seller in that market has had absolutely no effect upon the ratings shown?

Mr. SEILER. I suppose I could. Actually that has never been of real concern to us, because we know that we are simply issuing what we find. We also know that there is some substantial facts underlying the story that the guy who subscribes occasionally gets the better ratings, but it is normally traceable, I think in the case of all the companies in the field, to a mixup of cause and effect.

We have a sales problem, of course, in each of these cities, selling to stations, and here is what usually happens. The station whose

ratings are a little bit better, and who can use the report for more sales, is the station that generally tends to subscribe, first. When a station that has not subscribed simply because there is just nothing they can use for selling against new programing, and then it gets say, the MGM package of films and its ratings begin going up, and then that station usually does come and buy the report when they see that these things are beginning to improve. And immediately this gives rise to talk around the industry that they bought the report and look how their ratings went up. Actually, their ratings went up and then they bought the report.

I can tell you in my own opinion that I am certain, knowing all of our colleagues in this industry, that the integrity in this particular field, television audience measurement, is as high as you will find in any industry anywhere. I don't think any of that is even suggested in any of the companies here.

I might mention that the bottom station in Washington, WTTG, is one of our good clients, and WATV in New York, and in Los Angeles, KCOP, the very bottom station, is a good client, and we haven't got the top one, KNXT. Actually, I don't feel there is any substance to that. That is the least of the industry problems.

Mr. Cox. Now, since it is known that you conduct your ratings in the first week of the month, isn't there danger of special programing, or extra promotion, on the part of the local station which is capable of influencing the rating results that you will get?

Mr. Seiler. Yes, there is. And this is a real problem to us. There were two alternatives. One was to measure all 4 weeks and produce a 4-week average, using a fourth of your sample each week. That abolishes program loading, but the difficulty there is that if there are any programing changes during the month, you lump the different programs together in your average, and you may, for instance, at a certain time period have 2 weeks of "How Does Your Garden Grow," then 2 weeks of "Jungle Jim." And you might get an average rating af 12, but what really happened was "Jungle Jim" had 23, and "How Does Your Garden Grow" had a 2, which tends to conceal facts like this.

On the other hand, if you measure the single week, you have stations all set to load the week with their best films and do a lot of promotion. Our solution to it has been this, and we are interested in this in a lot of our markets: Either to use an unannounced week, which we disclose only after the measurement has been made, or to combine the best features of the single week and the 4-week average and produce what we call a 1-week, 4-week. This is a double measurement. It measures 1 week of the month, but it also measures all 4 and produces two sets of results—one the single week, and one the 4-week average.

Then, when you did have a program change, you have a single rating for a specific show in your 1 week; where the programing hasn't changed you have the more stable 4-week average. We have attempted to take the best parts of both in the 1-week, 4-week.

Mr. Cox. Do you have any control over whether your client then uses the 1 week, if he loaded that week, and therefore can show a better rating for that week than would have been shown for the 4-week average?

Mr. SEILER. We don't have control over it, but the client's competitors certainly do; because the minute he starts doing that, they immediately, or their representative goes into the agency and points to the 4-week average and says "On his film show he got a 21 on the first week, but his 4-week average on this was only a 13." This means that in the other 3 weeks he should have been running 8 to get a 21 the first week, he has loaded it; and the advertiser should disregard it and use the 4-week.

They attend to this very nicely, the competitors. It is in the same book, incidentally; the two ratings are side by side in the same publication.

Mr. COX. Can you furnish us, if you have not already done so, with a sample of the diary that you use and a sample of one of your local and national reports?

Mr. SEILER. I believe I did, in reply to Senator Magnuson's letter. We sent you our interviewing forms and the diary.

(Material submitted is in committee files.)

Mr. COX. Do you have something further to say? I interrupted you. Your full statement, of course, will be included in the record.

Mr. SEILER. I don't think I have a lot to add to what is in my statement here. I just want to say that we at ARB are personally delighted that you have asked us to come here, because this is a very difficult problem, the problem of ratings in the television industry. We have been trying to face it, and our attitude is, if we can give you any help here, and supply any information that will help you discover the position of this science, as you might call it, in the industry, we will certainly be glad to do so. Because although many of our problems are fancied ones, and many have no basis in fact, we still do have a few, and we are trying very hard to overcome them in our own industry, and my feeling is that we are making some progress.

Senator MONRONEY. Thank you very much, Mr. Seiler, for your information.

Mr. Edward G. Hynes, Jr., president of Trendix, Inc. Will you identify your associates?

STATEMENT OF EDWARD G. HYNES, JR., PRESIDENT, TRENDEX, INC.

Mr. HYNES. This is Mr. Rogers, my associate, and Dr. Deming, whom we have brought along as an expert witness in sampling.

(The biographical sketch of Dr. Deming is as follows:)

W. EDWARDS DEMING, PROFESSOR OF STATISTICS, GRADUATE SCHOOL OF BUSINESS ADMINISTRATION, NEW YORK UNIVERSITY

PAST POSITIONS

Instructor in engineering, University of Wyoming, 1921–22.
Assistant professor of physics, Colorado School of Mines, 1922–24.
Assistant professor of physics, University of Colorado, 1924–25.
Instructor in physics, Yale University, 1925–27.
Mathematical physicist, Department of Agriculture, 1927–39.
Adviser in sampling, Bureau of the Census, 1939–45.
Professor of statistics, Graduate School of Business Administration, New York University, 1946–.
Consultant in research and in industry, 1946–.

DEGREES

B.S., University of Wyoming, 1921.
M.S., University of Colorado, 1924.
Ph. D., Yale University, 1928.
LL.D. (honoris causa), University of Wyoming, 1958.

INTERNATIONAL ACTIVITIES

Statistician, Allied Mission to Observe the Greek Elections, January–April 1946; July–October 1946.
Consultant in sampling to the Government of India, January and February 1947; December 1951.
Delegate from the A.A.A.S. to the Indian Science Congress, New Delhi, January 1947.
Adviser in sampling techniques to the Supreme Command of the Allied Powers, Tokyo, 1947 and 1950.
Teacher and consultant to Japanese industry, through the Union of Japanese Scientists and Engineers, 1950, 1951, 1952, 1955, 1956.
Adviser in sampling techniques to the High Commission for Germany, 1952 and 1953.
Exchange scholar to Germany, 1952 and 1953.
Lecturer at the University of Kiel, der Institut für Sozialforschung at Frankfurt, der Technical Akademie at Wuppertal-Elberfeld, der Technische Hochschule at Nürnbergfi der Österreichesches Institut für Wirtschaftsforschung at Wien, 1953.
Member of the United Nations Subcommission on Statistical Sampling, 1947–52.
Consultant to the Census of Mexico, to the Bank of Mexico, and to the Ministry of Economy, 1954, 1955.

HONORS

The Deming Prize was instituted by the Union of Japanese Scientists and Engineers and is awarded each year in Japan to a Japanese statistician for contributions in statistical theory that may lead to improved quality and increased industrial production.

Recipient of the Shewhart Medal for 1955 from the American Society for Quality Control.

SOCIETIES

American Statistical Association (fellow).
Royal Statistical Society (London) (fellow).
Institute of Mathematical Statistics (fellow).
American Society for Quality Control (fellow).
International Statistical Institute.
Philosophical Society of Washington.
Mathematical Association (London).
World Association for Public Opinion Research.
Market Research Council.
Biometric Society.
American Society for Testing Materials.
Union of Japanese Scientists and Engineers (honorary life member).
Japanese Statistical Association (honorary life member).

COMMITTEES

Various committees, national and international, on standards of sampling for research, industry, and Government use.

BOOKS AND BROCHURES

"On the Statistical Theory of Errors," by W. Edwards Deming and Raymond T. Birge (the Graduate School, Department of Agriculture, Washington). (This is a reprint of paper No. 24 with additional notes added in 1937 and 1938.)
"Least Squares" (the Graduate School, Department of Agriculture, Washington, 1938).
"Statistical Method From the Viewpoint of Kuality Control," by Walter A. Shewhart and W. Edwards Deming (the Graduate School, Department of Agriculture, Washington, 1939).

"Facsimiles of Two Papers by Bayes," with commentaries by E. C. Molina and W. Edwards Deming (the Graduate School, Department of Agriculture, Washington, 1940).
"Statistical Adjustment of Data" (John Wiley & Sons, 1943).
"The Gamma and Beta Functions" (the Graduate School, Department of Agriculture, Washington, 1946).
"A Chapter in Population Sampling," by W. Edwards Deming, Morris Hansen, William Hurwitz, and Benjamin J. Tepping (Bureau of the Census, 1947).
"Theory of Sampling" (John Wiley & Sons, 1950).
"Elementary Principles of the Statistical Control of Quality" (Nippon Kagaku Gijutsu Renmei, Tokyo, 1950, 1952; in English).
"Replicated Sampling Designs," in press.

PAPERS

(Book reviews and short notices not included; the authorship is W. Edwards Deming alone unless otherwise indicated)

1. Equipotential surface electrons as an explanation of the packing effect, Phys. Rev., vol. 31, 1928: pp. 453–65.
2. On the diffusion of hydrogen through iron, Phil. Mag., vol. 5, 1928: pp. 1081–4.
3. The equation of state of a mixture determined from the equations of state of its constituents, by W. Edwards Deming and Lola E. Shupe, J. Franklin Inst., vol. 208, 1928: pp. 389–95.
4. Chart of the electromagnetic energy relations, J. Optical Soc., vol. 18, 1929: pp. 50–1.
5. The gravitational flow of fertilizers and other comminuted solids, by W. Edwards Deming and Arnon L. Mehring, J. Ind. and Eng. Chem., vol. 21, 1929: pp. 661–5.
6. On the determination of the parameters in an empirical formula, Proc. London Physical Soc., vol. 42, 1930: pp. 97–107. Read at the meeting of the London Physical Society, 13 Dec. 1929.
7. The application of least squares, Phil. Mag., vol. 11, 1931: pp. 146–58. Read at the New York meeting of the American Physical Society, 22 Feb. 1930.
8. The constants of the Beattie-Bridgeman equation of state with Bartlett's p, v, T data on nitrogen, W. Edwards Deming and Lola E. Shupe, J. Amer. Chem. Soc., vol. 52, 1930: pp. 1382–9.
9. The constants of the Beattie-Bridgeman equation of state with Bartlett's p, v, T data on hydrogen, by W. Edwards Deming and Lola E. Shupe, J. Amer. Chem. Soc., vol. 53, 1931: pp. 843–9.
10. The Beattie-Bridgeman equation of state and Bartlett's p, v, T data on a 3 : 1 hydrogen nitrogen mixture, by W. Edwards Deming and Lola E. Shupe, J. Amer. Chem. Soc., vol. 53, 1931: pp. 860–9.
11. Temperature distribution along a heated filament used as a catalyst, by Edward S. Lamar and W. Edwards Deming, Phil. Mag., vol. 9, 1930: pp. 28–36.
12. Bates and temperature coefficients of the catalytic decomposition of ammonia over molybdenum, tungsten, and promoted iron, by C. H. Kunsman, E. S. Lamar, and W. Edwards Deming, Phil. Mag., vol. 10, 1930: pp. 1015–37.
13. The ignition of carbon monoxide oxygen mixtures: the effect of impurities, by A. Keith Brewer and W. Edwards Deming, J. Amer. Chem. Soc., vol. 52, 1930: pp. 4225–33.
14. Note on the heat capacity of gases at low pressure, by W. Edwards Deming and Lola E. Shupe, Phys. Rev., vol. 37, 1931: p. 220.
15. Some physical properties of compressed gases, I. Nitrogen, by W. Edwards Deming and Lola E. Shupe, Phys. Rev., vol. 37, 1931: pp. 638–54.
16. Some physical properties of compressed gases, II. Carbon Monoxide, by W. Edwards Deming and Lola E. Shupe, Phys. Rev., vol. 38, 1931: pp. 2245–64.
17. Some physical properties of compressed gases, III. Hydrogen, by W. Edwards Deming and Lola E. Shupe, Phys. Rev., vol. 40, 1932: pp. 848–59.
18. The equilibrium of para and ortho hydrogen, by Roy W. Harkness and W. Edwards Deming, J. Amer. Chem. Soc., vol. 54, 1932: pp. 2850–2.
19. Chart of electromagnetic relations, by W. Edwards Deming and F. G. Cottrell, Rev. Sci. Instruments, vol. 3, June 1932.

20. The refractive indices of ammonium nitrate, by Sterling B. Hendricks, W. Edwards Deming, and Merrill E. Jefferson, Zeitschrift für Kristallographie (A), vol. 85, Nos. 1, 2, 1933: pp. 143–55.
21. Some physical properties of compressed gases, IV. The entropies of nitrogen, hydrogen, and carbon monoxide, by W. Edwards Deming and Lola S. Deming, Phys. Rev., vol. 45, 1934: pp. 109–13.
22. The dissociation constant of nitrogen-nitrogonase in azotobacter, by Hans Lineweaver, Dean Burk, W. Edwards Deming, J. Amer. Chem. Soc., vol. 56, 1934: pp. 225–30.
23. On the application of least squares, II. Phil. Mag., vol. 17, 1934: pp. 804–29.
24. On the statistical theory of errors, by W. Edwards Deming and Raymond T. Birge, Reviews of Modern Physics, vol. 6, 1934: pp. 119–61. Reprinted, with additions, by the Graduate School, 1937.
25. On the chi-test and curve fitting, J. Amer. Stat. Assoc., vol. 29, 1934: pp. 372–82.
26. On the application of least squares, III. A new property of least squares. Phil. Mag., vol. 19, 1935: pp. 389–402.
27. On the optical anisotropy of molecular crystals, by Sterling B. Hendricks and W. Edward Deming, Zeitschrift für Kristallographie (A), vol. 91, 1935: pp. 290–301.
28. On the minimum in the Gamma function, by W. Edwards Deming and Clarence G. Colcord, Nature, vol. 135, June 1, 1935: p. 971.
29. Some physical properties of compressed gases, V. The Joule-Thomson coefficient for nitrogen, by W. Edwards Deming and Lola S. Deming, Phys. Rev., vol. 48, 1935: pp. 448–9.
30. On the influence of classification, by H. Arthur Meyer and W. Edwards Deming, J. Amer. Stat. Assoc., vol. 30, 1935: pp. 671–7.
31. On the significance of slopes and other parameters estimated by least squares, Phys. Rev., vol. 49, 1936: pp. 243–7.
32. On the significant figures of least squares and correlations, Science, vol. 85, 1937: pp. 451–4.
33. Some thoughts on curve fitting and the chi-test, J. Amer. Stat. Assoc., vol. 33, 1938: pp. 543–51.
34. On a problem of natural increase, by W. M. Dawson and W. Edwards Deming, Growth, vol. 2, 1938: pp. 319–26.
35. On the frequency interpretation of inverse probability, Nature, vol. 143, 1939: p. 202.
36. Some physical properties of compressed gases, VI. The fugacity of carbon dioxide, Phys. Rev., vol. 56, 1939: pp. 108–12.
37. The assignment of uncertainties to the data of chemistry and physics, by Frederick D. Rossini and W. Edwards Deming, J. Washington Acad. Sci., vol. 29, 1939: pp. 416–41.
38. Theory of the van der Waals adsorption of gases, by Stephen Brunauer, Lola S. Deming, W. Edwards Deming, and Edward Teller, J. Amer. Chem. Soc., vol. 62, 1940: pp. 1723–32.
39. On the sampling problems of the 1940 population census, by F. F. Stephan, W. Edwards Deming, and Morris H. Hansen, J. Amer. Stat. Assoc., vol. 35, 1940: pp. 615–30. An abstract of this paper appeared under the same title by W. Edwards Deming, in the Cowles Commission report of the 6th Annual Conference on Economics and Statistics at Colorado Springs, July 1940.
40. On a least squares adjustment of a sampled frequency table when the expected marginal totals are known, by W. Edwards Deming and F. F. Stephan, Annals of Mathematical Statistics, vol. XI, 1940: pp. 427–44.
41. On the sampling methods of the 1940 population census, by F. F. Stephan and W. Edwards Deming, bulletin issued by the Bureau of the Census, Feb. 1941.
42. On the interpretation of censuses as samples, by W. Edwards Deming and F. F. Stephan, J. Amer. Stat. Assoc., vol. 36, 1941: pp. 45–9.
43. Some thoughts on statistical inference, J. Washington Acad. Sci., vol. 31, 1941: pp. 85–93.
44. On the elimination of unkown ages in the 1940 population census; bulletin issued by the Bureau of the Census, Jan. 1942.
45. On sample inspection in the processing of census returns, by W. Edwards Deming and Leon Geoffrey, J. Amer. Stat. Assoc., vol. 36, 1941: pp. 351–60.
46. On some contributions of statistical inference to marketing research, Proceedings of the Ohio Conference, Columbus; Nov. 1941.

47. On a classification of the problems of statistical inference, J. Amer. Stat. Assoc., vol. 37, 1942: pp. 173–85.
48. Errors in card punching, by W. Edwards Deming, Benjamin J. Tepping, and Leon Geoffrey, J. Amer. Stat. Assoc., vol. 37, 1942: pp. 525–36.
49. Opportunities in mathematical statistics, with special reference to sampling and quality control, Science, vol. 97, 1943: pp. 209–14.
50. On the efficiency of deep stratification in block sampling, J. Amer. Stat. Assoc., vol. 38, 1943: pp. 93–100.
51. On some census aids to sampling, by Morris H. Hansen and W. Edwards Deming, J. Amer. Stat. Assoc., vol. 38, 1943: pp. 353–7.
52. Some principles of the Shewhart methods of quality control, Mechanical Engineering, vol. 66, 1944: pp. 173–7.
53. A view of the statistical method, The Accounting Review, vol. 19, July 1944: pp. 254–60.
54. On errors in surveys, American Sociological Review, vol. 9, August 1944: pp. 359–69.
55. On training in sampling, J. Amer. Stat. Assoc., vol 40, Sept. 1945: pp. 307–16.
56. On the design of a sample for dealers' inventories, by W. Edward Deming and Willard Simmons, J. Amer. Stat. Assoc., vol. 41, March 1946: pp. 16–33.
57. On a population sample for Greece, by Ramond J. Jessen, Richard H. Blythe, Jr., Oscar Kempthorne, and W. Edward Deming, J. Amer. Stat. Assoc., vol. 42, 1947: pp. 357–84.
58. Some criteria for judging the quality of surveys, J. of Marketing, vol. 12, 1947: pp. 145–7.
59. The need for statistical education in high school and college, by W. Edwards Deming and Douglas E. Scates, The Education Record, Jan. 1948: pp. 72–80.
60. A brief statement on the uses of sampling in censuses of population, agriculture, and in public health and commerce, United Nations, Sub-Commission on Statistical Sampling, 1948 (International Documents Service, Columbia University Press, New York 27).
61. Education in statistics for participation in current affairs, by Douglas E. Scates and W. Edwards Deming, The School Review, vol. LVI, May 1948: pp. 262–9.
63. Observations on the 1946 elections in Greece, by Deming, Jessen, Kempthorne, Daly, Amer. Soc. Rev., vol. 14, 1949: pp. 11–6.
65. On a method of estimating birth and death rates and extent of registration, by C. Chandra Sekar and W. Edwards Deming, J. Amer. Stat. Assoc., vol. 44, 1949: pp. 101–15.
66. Some problems in the sampling of bulk materials, by Louis Tanner and W. Edwards Deming, Proceedings of the A.S.T.M., vol. 49, 1949: pp. 1–6.
68. On the sampling of physical materials, Revue internationale de statistique, vol. 18, 1950: pp. 1–20.
70. On an important limitation to the use of data from samples, by Morris H. Hansen and W. Edwards Deming, Bulletin de l'institut international de statistique, Bern 1950: pp. 214–9.
78. Statistical techniques as a national resource, Bulletin of the Indian Society for Quality Control, vol. 1, 1953: pp. 29–37.
79. Sampling in a government statistical system, Grundfragen der Vorbereitungsarbeit eines deutschen Mikrozensus, Statistitiches Bundesamt, Wiesbaden, July 1953.
80. A statistical test of significance applied to a sociological problem: variation in accident rates from motor vehicles, by A. D. Battey, Josephine D. Cunningham, and W. Edwards Deming, Amer. Soc. Rev., vol. 17, No. 6, Dec. 1952: pp. 755–61.
81. On the distinction between enumerative and analytic surveys, J. Amer. Stat. Assoc., vol. 48, 1953: pp. 244–55.
82. Statistical techniques and international trade, J. of Marketing, vol. xvii, 1953: pp. 428–33.
82a. Techniques statistiques et commerce international, Courier de la normalization, No. 109, Jan.–Feb. 1953: pp. 41–4.
82b. Tecnicas estadísticas y comercio internacional, Racionalización del Trabajo (Madrid), Año 6, num. 3, 1953: pp. 180–4.
83. Management's responsibility for the use of statistical techniques in industry, Advanced Management, vol. xviii, No. 1953: pp. 8–12.

84. On the presentation of the results of sample surveys as legal evidence, J. Amer. Stat. Assoc., vol. 49, 1954: pp. 814–25.
85. Some basic principles of sampling, Proceedings of the Seventh Annual Convention, American Society for Quality Control, Philadelphia, May 1953: pp. 427–34.
86. On the necessity of presenting consumer preferences as predictions, by Alfred Politz and W. Edwards Deming, J. of Marketing, vol. 1, July 1953: pp. 1–5.
87. On a probability mechanism to attain an economic balance between the error of response and the bias of nonresponse, J. Amer. Stat. Assoc., vol. 48, 1953: pp. 743–72.
88. On the teaching of statistical techniques to people in industry, Proceedings of the International Statistical Institute (The Hague), 1953.
88a. De l'enseignement des principes et des techniques de la statistique aux personnels des entreprises, Courier de la normalization, 1954: pp. 5–23.
88b. La enseñanza de los principios y técnicas estadísticas al personel de la indústria, Revista del Instituto Nacional de Racionalización del Trabajo (Madrid), Año 7, num. 2, March–April 1954.
89. Die Verantwortung der Betriebsfuhrung für die Anwendung Statistischer Methoden in der deutschen Industrie, Weltwirtschaftliches Archiv (Kiel), vol. 71, 1953: pp. 234–50.
90. A career in statistical administration, Bulletin, The Graduate School of Business Administration, New York University, 1953.
91. On simplifications of sampling design through replication with equal probabilities and without stages, J. Amer. Stat. Assoc., vol. 51, March 1956: pp. 24–53.
92. On the possible types of sampling unit in the last stage of selection in a probability sample, Bulletin, Advertising Research Foundation, 11 West 42d Street, New York 36, September 1955.
93. On the contributions of statistical standards to law and accounting, Current Business Studies, Graduate School of Business Administration, New York University, No. 19, October 1954: pp. 14–32.
94. On the use of theory, Industrial Quality Control, vol. xiii, No. 1, July 1956, being an address delivered upon receipt of the Shewhart Medal, at the 10th annual meeting of the American Society for Quality Control, Montreal, 7 June 1956.
95. Some advantages of replicated sampling, Proceedings, American Society for Quality Control, Rutgers University, 8 September 1956.
97. Some elementary theory of stratification, Transactions of the American Society for Quality Control, 9th Annual Convention, New York, 24 May 1955: pp. 233–51.

Senator MONRONEY. We thank you for coming down and giving us what information you have in this field. Do you have a prepared statement?

Mr. HYNES. I do not, sir. We will just tell you much of what has already been stated in the outline that you have there.

We use the telephone coincidental method of interviewing. We interview in 20 cities and produce a report which is a composite of our findings in those cities.

We do this on the first week of the month. We use a sample of 1,000 calls for a half-hour of evening programing.

Senator MONRONEY. A thousand?

Mr. HYNES. A thousand dialings in one-half hour.

Senator MONRONEY. You poll one an evening?

Mr. HYNES. We poll every half-hour the first week of the month from 8 in the morning until 11 at night. We use 1,000 calls in the evening. The daytime is an average, Monday through Friday, by quarter-hours, and has a sample of about 1,500 dialings per quarter-hour.

Mr. Cox. This is done locally in each of the cities in which you operate, and the results are then sent to your headquarters?

Mr. HYNES. That is correct.

Mr. Cox. Have you listed to us before, and, if not, can you either tell us now or furnish for us the list of 20 cities?

Mr. HYNES. We certainly can. The cities are in the front of the report [handing one up].[2]

Mr. Cox. Can you tell us how they were picked? You indicated, of course, that the basic requirement was that they be major cities which can receive three live programs from the three networks?

Mr. HYNES. They are cities of what you might call equal opportunity of viewing. Each of these cities has three VHF outlets, each is on the cable, each can receive three live television programs originating in New York simultaneously. They represent, geographically, a good spread of those cities that can receive and have such facilities.

Mr. Cox. Do you apportion the calls that you make among these in accordance with their population, or simply——

Mr. HYNES. In accordance with the television penetration in each city.

Mr. Cox. In other words, the percentage——

Mr. HYNES. New York would have a larger weight in the sample than Atlanta would, for example.

Mr. Cox. Could you tell us—we have gotten figures from the other two services—as to the size of the sample in New York City?

Mr. HYNES. About 24 percent of our 1,000 calls would be in New York.

Mr. Cox. Now, do you use roughly the same methods in selecting your sample which are used by Nielsen and ARB?

Mr. HYNES. We don't use a fixed sample. We use a random sample. We take our sample directly from the telephone book. The only change we make in it is that we divide the telephone book into quarters, and we take—each girl makes 16 dialings every 13 minutes; so that we take the first 4 names from the first section; the first 4 from the second; the first 4 from the third, and the first 4 from the fourth. This merely prevents us from falling in one ethnic or sociological group with our sampling.

Mr. Cox. Does she have four numbers in each of these sections that are given to her?

Mr. HYNES. No. She makes the selection from instructions. She takes the first four names, red-lines them, and never goes back to them until she has gone completely through the telephone book.

Mr. Cox. She takes them in consecutive order?

Mr. HYNES. Yes; in consecutive order. The telephone book is already random. We don't try to randomize the book.

Mr. Cox. And you follow the same procedure in each of the cities?

Mr. HYNES. That is right, sir.

Mr. Cox. Now, we discussed with Mr. Seiler the matter of the suggestion by the Advertising Research Foundation that you suffer from a limitation to telephone homes. Now, obviously since your method——

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[2] The cities are New York, Chicago, Detroit, Philadelphia, Boston, Cleveland, St. Louis, Dallas-Ft. Worth, Baltimore, Minneapolis-St. Paul, Houston, Cincinnati, Washington, Kansas City, Indianapolis, Columbus, Atlanta, Denver, Omaha-Council Bluffs, and Nashville.

Mr. HYNES. I wouldn't agree with that. We don't suffer from a limitation to telephone homes. What we do, sir, you will find very explicitly in the front of the book. We are making a measurement based on telephone homes within 20 cities. It is simply what it says it is. And that is what we do.

Mr. COX. Then, when it is compared to one of the national services, which I would assume would be either ARB or Nielsen, this may result in apparent discrepancies because of the difference in the procedure and the extent of the survey you undertake to make?

Mr. HYNES. Well, I would like to say, when it is compared by whom?

Mr. COX. By someone who criticizes what appears to be a marked discrepancy in the ratings. In other words, I referred to Mr. Seiler this matter of Nielsen's rating of "Fireside Theater" falling and yours rising.

Mr. HYNES. Who said that, though? This is a writer?

Mr. COX. A writer in Time magazine.

Mr. HYNES. I don't believe, first of all, the comparison should be made. There is no reason to make a comparison between any of the services. That isn't the proof of whether we have good service or not, whether we come out the same way.

Mr. COX. In other words, your service is purchased primarily because it rates network programing and it gives an immediate reponse?

Mr. HYNES. And it does it under certain conditions.

Mr. COX. Whereas the others are doing a nationwide survey and producing results at later dates; and they produce, therefore, a different thing that is measured?

Mr. HYNES. That is correct. They are measuring something different, they are doing it in a different way. There is no reason why anyone should ever compare even two national services, as far as I can see, if they are doing it with different techniques.

Mr. COX. Now, it has been suggested that since both you and Nielsen rate essentially networks, or at least that is one important use that is made of the ratings—and I am afraid I can't even be as precise in telling you where I got this information as I was with respect to this other—but it is suggested that CBS does better than NBC on Trendex in comparison to Nielsen, because NBC has more stations and the fact that you use a measurement limited to 20 major markets causes them to lose their advantage in probable total viewing across the country. In other words, that you get a rating, which in some circles, at least, is used as a nationwide rating, and which seems to be disproportionately in favor of the other network, CBS.

Mr. HYNES. Well, there are an awful lot of "ifs," "ands," and "buts" in there.

The thing is that if you are going to compare NBC and CBS, use either Trendex or use Nielsen—use the same yardstick, don't use two different yardsticks and say one is better on one, and one is better on another. Quite possibly they are, and for very good reasons; for very demonstrable reasons they are different.

I don't know how to answer that question—one is better on Nielsen and one is better on Trendex. It is quite possible they are.

Mr. COX. And therefore they should pick the service if it favors them.

Mr. HYNES. I think that would be very shortsighted. We are not selling a publicity report, we are selling research. They may be bad, and they might like to know. NBC might like to know why it is bad on the Nielsen and CBS might like to know why it is bad in 20 competitive markets. If I were running a network, I would. So I would probably buy both.

Mr. COX. In the 20 markets, of course, the results would be affected by the whole job being done by the affiliates in those markets?

Mr. HYNES. It is affected by many things, of course.

Mr. COX. What percentage of the numbers called refuse to take the call, or don't answer?

Mr. HYNES. That is two questions. Let's talk about refusals, first of all. This would vary a bit with the time of day. I would say it never gets over five one-hundredths percent, probably, the refusals. The y are very low. They are a little higher later in the evening than they are at other times during the day; but basically and primarily the American people do not mind answering the phone. They love to think they are part of a national sample, that they are getting their opinion expressed.

The second question as to the number of "don't answers," that very definitely varies with the time of the day that you are calling. In the morning and during the day, the available homes in daytime may drop as low as 60 percent. In the evening, it may be up as high as 85 or 90 percent.

Mr. COX. Those not answering are reported as not viewing?

Mr. HYNES. That is correct. If they are not home or awake, they couldn't be viewing.

Mr. COX. Don't many of them say they are not watching, just to end the conversation? Or do the girls find they are usually able to complete whatever questions they are instructed and get a complete reply?

Mr. HYNES. An interview that starts, that gets through the first question, generally gets through all the questions, unless it is a very long survey. But speaking on this report, where the questions are short and concise and to the point; when they start they get through the whole survey. Usually, we get the refusal immediately, at the immediate outset of the call; and they run, as I said, about five one-hundredths of 1 percent.

Mr. COX. You don't add another name; she still calls only the four names when she gets a refusal?

Mr. HYNES. She is going to call 16 in 13 minutes.

Mr. COX. You can't count the one that refuses to answer——

Mr. HYNES. Oh, yes; it is a part of the sample.

Mr. COX. You rate the first week in each month, as you indicated. What would be your comment, with respect particularly to network live shows, on the danger of presenting a particularly good show that week and employing extra advertising and promotion in order possibly to affect the rating that results?

Mr. HYNES. Well, you are asking me to theorize; but my theory would be that it is not nearly as great as people would like to believe it is.

First of all, we rate the first week of the month to produce this report. We rate almost every night in the month, or at least some

time periods in every night of the month, to produce ratings on programs. The people who are going to buy shows, either advertising agencies or advertisers, are not naive enough to take one rating on any show, I don't think. Very often if an agency is pitched a show by a network, the network will contact us and we will survey the show—or the agency will contact us, we will survey the show, and the network will have no idea the survey is even going on.

I just don't feel that this problem exists. I don't think it is important. These people are not the newspapers that are writing about this thing; they are pretty astute individuals, spending a lot of money, and they are getting the information before they spend the money, I think.

Mr. Cox. In other words, you don't think that a regular weekly show—take the familiar example of Allen and Sullivan—would seek to get a particularly strong attraction?

Mr. Hynes. Yes, I do think it would do that; but I think purely for the promotion that they can get out of the higher rating, they might do it. I don't say they have done it, but they could do it, and it would get them a higher rating. But it wouldn't avail them anything. If Mr. Allen's agent goes to B.B.D. & O. to sell that show, they are not going to buy it on the basis of that one rating anyway. So I don't think it makes any difference whether he "hypos" that show or not; because the agency will probably come to us and we will do it for 3 or 4 weeks and find out more on the rating on the show before B.B.D. & O. will put their money in it.

Mr. Cox. One of the situations that has attracted most attention in connection with your service was the alleged exclusion from the Top Ten of the program "Twenty-one," because it never fell—for a period of at least 2 or 3 months—in the first week, because spectaculars or something of that sort were in its time period. We have here—and I am sure you are familiar with it—Jack Gould's comment in the New York Times of March 3 of last year.

Mr. Hynes. Yes.

Mr. Cox. Obviously the show is still on the air, so it wasn't put off by the fact it didn't get into your rating; but does this result in some misrepresentation, in view of the wide publicity that is given to the "Top Ten," you come up with, even though it is only what you say it is, but it is publicized as something else?

Mr. Hynes. Does it result in what, sir?

Mr. Cox. Is there a distortion, because some of these shows do not appear in the week in which you rate, and that therefore—

Mr. Hynes. I wouldn't say so. We rate the first week of the month. We are publishing the Top Ten for that week. If a show isn't on the air, it can't be in the Top Ten.

Mr. Cox. It is published as March Trendex.

Mr. Hynes. It is published as March 1 through March 7 Trendex.

Mr. Cox. By you?

Mr. Hynes. That is the way we release it for release.

Mr. Cox. Is that binding on people who use it?

Mr. Hynes. It should be, sir, and that is the only piece of material Trendex releases. Any other ratings you see in the trade press are not released by Trendex. The only thing we release to the press each month is the Top Ten for the first week of the month, but every one that gets a rating says—you know.

Mr. Cox. How about my discussion with Mr. Seiler on this matter of the margin of error in respect to this. Do you have, and do you publish with your reports, a table which shows—I haven't had a chance to examine the report—a table which shows this error factor for your ratings?

Mr. HYNES. No, sir; we do not.

Mr. Cox. Do you have one?

Mr. HYNES. Oh, yes.

Mr. Cox. What is it; is it on the same order as Mr. Seiler's?

Mr. HYNES. Actually, the report we sell—and the reports most of these gentlemen that appeared before you today sell—is sold to research people in the networks and the agencies. Before they buy our reports, they are completely conversant with our sample, our method, and the margin of error, if it exists in any one of the services that they buy; so that it isn't really necessary to publish it.

Mr. Cox. On your sample size, and assuming ratings within 4 percentage points in a range of 30, would you agree that if they are within 4 points it is not clearly demonstrated that one really led the other?

Mr. HYNES. Not necessarily. I would like Dr. Deming to answer the question, though.

Mr. Cox. Dr. Deming, did you get the question? I asked Mr. Seiler, and I understood he agreed that if you had a rating of 32 and a rating of 28 that because of this error factor it is not clearly demonstrated that the one really exceeded the other at all, much less by 4 points.

Dr. DEMING. Well, it could be, I suppose. I am not just sure what survey you are speaking about, nor what the standard error of that survey is.

Mr. Cox. Well, let's take yours. Suppose you had in your Top Ten a show that is given a rating of 32 and another with a rating of 28. I don't know whether this will make your Top Ten or not. But based on your sample and on your table for standard error, you had Show A rated at 32 and Show B rated at 28. Now, is that within a range such that actually Show B might have been viewed by more viewers than Show A?

Dr. DEMING. I don't believe anybody can answer that question. I don't know that the standard error is known. I do not know it. There has been a lot of talk about standard errors, but I am not sure what they are.

Mr. Cox. Your organization does have——

Mr. HYNES. Dr. Deming isn't with our organization; he is here as a consultant, sir.

Mr. Cox. Could you supply us with a copy of your standard——

Mr. HYNES. It is a standard standard error. It would be the same.

Mr. ROGERS. It would be the same as anybody that uses approximately 1,000 homes used. It is a random sample, and it would be the same. If what they say is correct, it is correct for us, too.

Dr. DEMING. I am not sure that it is correct. I might point out that the size of the sample has very little to do with the precision or accuracy thereof. It depends on how it is drawn. That is what counts. Hence, I can't answer the question about any of them, because I do not know how they were drawn.

Mr. Cox. Is there, in this field, a likelihood that this allowance for error increases as the rating in question is reduced?

Dr. Deming. I think Mr. Nielsen gave the correct answer on that. That is if the percentage, or whatever you call it, rating goes up, the absolute error will also go up, but the relative error will go down. I think that would be true regardless of the method of sampling. I think that is a general statement that anyone is safe in making. I can't imagine any sampling plan that wouldn't work out that way.

Mr. Cox. I wonder if you could supply this information for us, to be sent in for the record. Could you take your survey for this month, and indicate the set count, the penetration used for each of the 20 cities; the total calls assigned to each of the 20 cities; the calls actually made; those completed and uncompleted; the number of interviewers employed in each of those cities; and the calculations, then, that are made to produce the rating which you finally come up with. Is that possible?

Mr. Rogers. For all the programs?

Mr. Hynes. That is a lot of work. I don't know that it is necessary.

Mr. Cox. Take one night.

Mr. Rogers. We would be glad to.

Mr. Cox. Take Sunday night of this month's week.

Mr. Hynes. What would you get out of that, may I ask? Maybe I am out of order asking.

Mr. Cox. We would, I think, simply have a better understanding of how your system is run in relation to the others.

Mr. Hynes. The reason I asked the question was that I think there are other things that we could give you which would be of more interest to you; or would demonstrate, perhaps better, that the survey technique that we are using is a good survey technique and can reproduce itself, and so forth—which is an important feature of the survey, not whether it correlates with somebody else.

Mr. Cox. Well, supply that in your own way. We simply wanted a little more information about how the thing is put together, what the actual base in these different cities is.[3]

I referred in the discussion with Mr. Seiler to this TPI rating for Syracuse. That is not one of your cities; you don't operate there. But in terms of the comparison of methods, where they used personal coincidental alongside telephone coincidental in 50 percent of the samples selected, they got in some instances considerable parallelism between the two, but in other cases up to 5 or 6 percentage points difference. Do you, as the others have indicated, use methods other than your own to check the results you get?

Mr. Hynes. We do not.

Mr. Cox. You rely entirely on the telephone coincidental method?

Mr. Hynes. That is correct. I think, and Dr. Deming could perhaps express this better than I, that the comparison between two methods is not as important as whether we can produce, or reproduce the same results using the same method in different samples.

Mr. Cox. You mean from month to month?

Mr. Hynes. Any time.

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[3] Certain materials were furnished later and inserted in the record on July 1, 1958. These are set forth below in an appendix at the end of the testimony for this day. However, certain of the information requested was not included.

Subsequently, on February 20, 1959, the tabulation was received and set forth at the end of the testimony for this day.

Mr. Cox. Or different samples in the same city?

Mr. HYNES. Different samples in the same city, or different samples in the different months. Almost any change in our ratings, contrary to what has been said formerly, is explainable. I don't think that you have to worry about using one rating as much as some people have indicated here today. We find that when a change occurs, it is almost always due to some physical phenomena or program change or competition that just sticks out like a sore thumb, and you can see it. I don't see these problems quite the same way as they have been seen by somebody else.

Mr. Cox. The result would not be the difference in method, but the difference in timing, weather, the opposite show——

Mr. HYNES. I think they are often explainable on those bases, yes.

Mr. Cox. We have your sample report. Have you furnished us with a sample form of interview—in other words, with the questions which the girl asks?

Mr. ROGERS. Was that in the list?

Mr. HYNES. If it was not asked for, we didn't. The questions themselves are in the report. Everything is demonstrated in the report so that there can be no question but what the figures are based on exactly what we say we do.

Mr. Cox. You give, each month, the detailed outline of the method by which you proceed?

Mr. HYNES. That is right.

Senator MONRONEY. Do you ever ask, in addition to these questions, "Do you like the program?"

Mr. HYNES. We have on special surveys, sir.

Senator MONRONEY. All you do is say, "Is the set on," and "what program are you listening to?"

Mr. HYNES. That is correct.

Mr. ROGERS. Senator, we ask two other questions. We ask how many men, how many women, and how many children are watching the program, and we alternate that month by month with the question, "Who sponsors the program; are there any other sponsors or products advertised," and that is the extent of it.

Mr. HYNES. I didn't realize you wanted that information. We ask who in the family chose the particular program that is being viewed, and we can tell you the age of the people that are viewing the program.

Senator MONRONEY. On special surveys?

Mr. ROGERS. There is a supplementary report in the back of the report, on this particular one—an index of men, women and children—audience composition—for all network shows.

Senator MONRONEY. So you do get the listing of the audience.

Mr. HYNES. We get the age, too.

Senator MONRONEY. On the thousand calls per half hour, that would average out, but it would average out about 20 percent. On the don't answers, did I understand you to say those go down just as calls made, but no negative or affirmative?

Mr. HYNES. They are negative. They are not at home or awake; they can't be watching television.

Senator MONRONEY. How do you know there is a television set in the house?

Mr. HYNES. We know the proportion of television sets in the area we are sampling; we know the penetration.

Mr. ROGERS. If we get a respondent, and the respondent is not watching television at the time of the call, we ask if they have a television set, so we have a known factor of television ownership in our sample. Now it is between 95 and 96 percent of the telephone homes, within the 20 cities, who do have television sets; so that we apply that ratio to the don't answers, which usually would amount to maybe 20 or 25 percent.

Senator MONRONEY. Do you show a very great decline in the listening audiences over the period of the summer months?

Mr. ROGERS. Sir, you can see that right in the front of the report. There is a graph on the third page which averages sets in use, monthly, and you can see the dropoff in the summer.

Senator MONRONEY. Do you think that is because the programs are so poor, or because people are out? It is a matter of which came first, the hen or the egg. There is nothing to look at if you turn it on.

Mr. HYNES. No doubt people do stay out in the evening.

Mr. ROGERS. They sit outside in the backyard.

Senator MONRONEY. Do the rates go down on television time?

Mr. HYNES. We don't know anything about rates.

Mr. COX. I notice in this Top Ten the second show has a rating of 25.4, and the seventh show has a rating of 23.8, so that if there is validity to this margin of error on the basis of the sample, you could have there a group which could probably more accurately be described as having about equal pull.

Mr. ROGERS. That is right. That happens more often in the summer than it does in the winter; they seem to flatten out and get closer in the Top Ten group.

Mr. COX. In this connection with the special promotions, we have an excerpt from Variety here indicating that one of the rating services was taking some stand to try to deal with this. Have you done anything like that, or do you just rely on the competitors meeting any effort in this direction, or having an additional survey made to average it out over the 4 weeks?

Mr. HYNES. I didn't get that.

Mr. COX. I think Mr. Seiler indicated that they had tried to meet this problem in some measure by this 1-week, 4-week arrangement. I think one of the other services was going to publish information as to special promotions which it felt might have distorted its results. Am I correct in my understanding that you would simply rely on some special inquiry being made as to the other unrated weeks?

Mr. HYNES. No. Perhaps on that particular phase of it, yes; but I think we have done our share to endeavor to educate certain seg-

ments of those interested in television. In many cases, it is very much like beating your head on a stone wall, particularly with certain elements in the press. You tell them, you write to them, you draw them diagrams; and the very next week they will come out and say exactly the same thing, and exactly the same misinformation will come out of there.

Senator MONRONEY. Thank you very much for your appearance here, Mr. Hynes.

Mr. Sidney Roslow, of Pulse, Inc. Would you please identify your associate?

Mr. ROSLOW. Mr. Levine, the company's counsel.

Senator MONRONEY. We appreciate your coming. Do you have a prepared statement?

STATEMENT OF SYDNEY ROSLOW, DIRECTOR, PULSE, INC., NEW YORK

Mr. ROSLOW. No; I do not have a prepared statement. I will try to present our point of view, dealing with the way in which our company operates, and, perhaps try to relate it to the question which is uppermost in your mind.

Our company differs considerably from our competitors in this field, and that is the result of the point of view we hold about the mode of operation.

I am a psychologist. I have a Ph. D. in psychology, and I have always taken the point of view that people are the subject matter of our research. People do the watching, people get the message, people buy the products.

Our television system is a commercial system, and I don't think we should lose sight of that, but it then becomes important to talk to people to find out what it is they have watched in their television activity. It is not the set which does it.

So we have always stood for a personal interview type of survey. My background in research stems back to, I guess, 1927, when I believe, as a freshman in college, I was out as an interviewer ringing doorbells, working my way through school. I have been in this field of market research and public opinion research for the Psychological Corp., one of the foremost survey companies of the sort, and for the Department of Agriculture during the early war years in the Program Surveys Division, when we were interviewing and doing research on attitudes all over the country.

Our company operates, and I will leave you a list of markets.[4] You probably have an old one, but this is more up to date, though they are out of date the day they come out. We operate all over the United States, market by market. We are surveying several markets in Canada, in Alaska, Hawaii, and Puerto Rico. We have even surveyed in Mexico—right across the border that is—and we have a company in Great Britain doing this type of research. We consider ourselves a research company in which our television activity, as I indicated last year—and I think it still holds about the same—is about 20 percent of our total revenue.

Now, taking the point of view we hold—that one must talk to people to find out what has happened—it means that we have to have interviewers; we have to send them out house to house; and this is a costly and a time-consuming operation. We necessarily have to draw a sample, much as our competitors do in this field, and I think we use the current practices which you would find described in the statistical textbooks. All of us, I imagine, are adapting the theory to actual practice. You find the theory in the textbooks, but you must always adapt the theory to the practice.

Because of the personal interview approach, it has been necessary to collect a great deal of information when an interviewer gets to a household. The personal coincidental, and I hold no brief for it, and you apparently—I detect that this seems to be the method par excel-

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[4] The markets are:

Abeline-Sweetwater
Albany-Troy-Schenectady
Albuquerque
Allentown - Easton - Bethlehem
Amarillo, Tex.
Asheville, N.C.
Atlanta, Ga.
Augusta, Ga.
Bakersfield, Calif.
Baltimore, Md.
Bangor, Maine
Baton Rouge, La.
Beaumont-Port Arthur
Birmingham, Ala.
Bismarck, N. Dak.
Boise-Meridian
Boston, Mass.
Brownsville, Tex.
Buffalo, N.Y.
Cedar Rapids, Iowa
Charleston, S.C.
Charleston-Huntington, W. Va.
Charlotte, N.C.
Chattanooga, Tenn.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Colorado Springs, Colo.
Columbia-Jefferson City
Columbia, S.C.
Columbus, Ga.
Columbus, Ohio
Corpus Christi, Tex.
Dallas, Tex.
Davenport-Rock Island
Dayton, Ohio
Des Moines, Iowa
Denver, Colo.
Detroit, Mich.
Duluth-Superior
El Paso, Tex.
Erie, Pa.
Evansville, Ind.
Fort Wayne, Ind.
Fort Worth, Tex.
Fresno, Calif.
Grand Rapids-Kalamazoo
Green Bay, Wis.
Greensboro, N.C.
Greenville, S.C.
Greenville-Washington, N.C.
Harrisburg, Pa.
Hartford, Conn.
Houston, Tex.
Houston-Galveston
Indianapolis, Ind.
Jackson, Miss.
Jacksonville, Fla.
Johnstown, Pa.
Joplin, Mo.-Pittsburg, Kans.
Kansas City, Mo.
Knoxville, Tenn.
Lake Charles, La.
Lansing, Mich.
Las Vegas, Nev.
Little Rock, Ark.
Los Angeles, Calif.
Louisville, Ky.
Lubbock, Tex.
Macon
Madison, Wis.
Marietta-Parkersburg
Mason City-Albert Lea-Austin
Memphis, Tenn.
Miami, Fla.
Milwaukee, Wis.
Minneapolis-St. Paul
Mobile, Ala.
Montgomery, Ala.
Nashville, Tenn.
New Haven-Hartford, Conn.
New Orleans, La.
New York
Norfolk, Va.
Odessa-Midland, Tex.
Oklahoma City
Omaha, Nebr.
Peoria, Ill.
Philadelphia, Pa.
Phoenix, Ariz.
Pittsburgh, Pa.
Portland, Maine
Portland, Oreg.
Providence, R.I.
Pueblo, Colo.
Quincy-Hannibal-Keokuk
Raleigh-Durham, N.C.
Richmond, Va.
Roanoke-Lynchburg
Rochester, N.Y.
Rockford, Ill.
Sacramento, Calif.
Saginaw-Bay City-Midland
St. Louis
Salinas-Monterey, Calif.
Salt Lake City
San Antonio, Tex.
San Diego, Calif.
San Francisco-Oakland
Santa Barbara, Calif.
Savannah, Ga.
Scranton-Wilkes-Barre
Seattle, Wash.
Seattle-Tacoma
Shreveport, La.
Sioux City, Iowa.
South Bend-Elkhart
Spokane
Springfield, Mass.
Springfield, Mo.
Syracuse
Tacoma
Tampa-St. Petersburg
Temple, Tex.
Toledo, Ohio
Tucson, Ariz.
Tulsa, Okla.
Waco, Tex.
Washington, D.C.
Waterloo
West Palm Beach
Wheeling-Steubenville
Wichita, Kans.
Wichita Falls, Tex.
Wilmington, Del.
Winston-Salem, N.C.
York, Pa.
Youngstown, Ohio

lence, and I don't believe this—because all of the comparisons which are being cited are "How does it compare with personal coincidental?"

When you go house to house, you can't afford to go on a coincidental basis. You can't send an interviewer out 16 miles to get a certain household and just ask one little bit of a question: "What are you watching now?" When you get there you have to make it worthwhile; you have to collect a lot of information.

Mr. Cox. Is this a matter of cost, largely?

Mr. Roslow. Cost, of course. This has thrown us into a recall system, and we use an aided recall system.

Now, our aids take two forms. One is an aid which we call the time-line technique, and I don't think that was explained fully in my original statement to you. Let me try to give you a bird's-eye view of what it is. When we get to a household, we are interested only in a segment of time. It may be as little as a 4-hour span; it might be an 8- or 12-hour span; it might refer to last night. This is the only segment that would go overnight. Our other segments of time are always today, sometime today; so that when we get to a household, one form of aid is in the time-line technique, and this is a recognition that people live by the clock.

We know what time we get up; we know what time we go to school or to work; we know what time we have breakfast, we know what time the youngster in the elementary school gets home for lunch; we know he gets home at 3 or 4 and has his sandwich and milk; we know when we get home from work, when we have our dinner; we know what time we go to bed. These are things we know, because we live by the clock.

Now, using these activities as anchors, if we are concerned, let us say, with last night, we would start with last night. "If we were in your home, well let's think about 6 o'clock, around dinnertime. You can picture that in your mind's eye, I am sure. Were you at a set?" You stop and think a moment. Then after dinner, we turn to the housewife, "Maybe you do the dishes, and while at that activity, is there a set in the kitchen, or is the youngster leaving the table and going into his room?" and he says "No, I was doing my homework."

"After dinner, did someone go out for the evening?" "Yes, Mary went out." "What time was that, was there a set going, or was it turned off when she went out, and what time did she come back? When she came back, was the switch thrown; or going to bed, what time was that and was the set turned off?"

In this technique, we get some estimates, "That is right, right after dinner, from about 7:30 to 9 it was, I had a set on; I watched, Billy watched with me, then I went out. After that, no, there wasn't anything on."

So we have limited the span of reporting, we haven't come in and said "You must have watched television; what did you watch?" We have tried to determine first that they were at a set. Now, after this has been determined, we would then produce a schedule of programs—we call it a roster—and these viewers would get a chance to study this roster of programs and actually put their fingers on those that they came across.

The roster shows the call letters of the stations, the channel numbers, and the names of the program. We would do no suggesting—

"Didn't you watch so and so?"—that is not in our domain. They have freedom of choice in looking at these programs and identifying them. This is the second form of aid, the program schedule.

We get the logs from the stations and compile a roster—the TV Guide is an excellent roster; the newspaper listings on television are quite complete. All of these are rosters which our interviewers do carry with them, and additional aids in identifying the programs which came through.

Our sample is, we think, a very good cross section sample of the total. We, too, have not been using the older system of quota sampling which was discarded some years ago, largely through the constructive efforts of the people in the census department, their experimental work in designing sample techniques.

It is also a random or probability sample. I think the best way for me to describe that——

Senator MONRONEY. Could you tell us how you pick out the people that you interview?

Mr. ROSLOW. The people who are interviewed? I would like to make it relatively simple.

Mr. COX. This is some 67,000 people, is that correct?

Mr. ROSLOW. We are operating in many, many markets across the country, and in the course of 1 month, we would interview easily 80,000, sometimes 100,000 depending on how many markets are running during that given month.

Now, the theoretical requirement for a sample—everybody has tried to demonstrate that to you—is to have all of the homes, and the home is the unit, all of the homes listed somehow, or put in a little goldfish bowl, mixed up and then you start to draw them out at random.

Of course, it doesn't operate like this in practice. The thing that would operate in practice, if you think of a telephone directory, you might have a list. Well, let's take a list—let's say in this city there are 1,000 families, and you had the thousand listed—the requirements for the true random sample would be that if you wanted to interview, let's say 100 out of the thousand, you would start with some random number—you can roll some dice or take it out of a book of random numbers, so you don't start with the first one, because this interferes with the operation of randoms. You start with a random number determined from a table of random numbers, which are published and you can buy them. You start with No. 3, maybe, and then you go every 10th one, and this would give the hundred which would be representative of the thousand. Next time around you pick another number. It start with eight. You go 8, 18, 28, and pick another sample.

In theory that is the way it would operate. In actual practice, it doesn't exist. There isn't an up-to-date directory. There is no complete directory for any city in the United States, or any market; no up-to-date directory, but we have a directory which is very similar to that in the housing statistics. In the housing statistics we can tell how many families live on each block within the confines of the civil community, the civil division; so we have these thousand names—not as names but we have on block 1, 6 of them; on block 2 there are 18; and block 3 there are 5; block 4 is a vacant lot, and so on. We

have them listed this way. So that again you do your counting operation.

If you are going to take every 10th, we take a random number 3 and 4 are 7, and 4 are 11, on the 10th block a family would be found. We don't know the name, but we know he will be found on the 10th block.

Again using random numbers, as we do, we select one of the sides—if you are going to think of a four-sided block, one of those sides would fall out as the starting side. Then one of the addresses would be drawn at random; and here is where we talk about modified probability sampling, because no one can apply this to the *n*th degree in practice. We don't have a random address. So we make a decision. We take the first address that ends in 4 or 5, because they don't know whether they are going to odd or even on that side of the street, the first address that ends in 4 or 5, and this is where the interviewer goes to make her interview.

Then we introduce another modification in the sampling. Because it costs so much money to get out there, we can't make just one interview; so we introduce clustering. If we are going to get out to this block, instead of making one interview, let us say we will make two interviews. Then we will make a decision on a random basis. It will be this one, and then maybe the third or fourth removed. Actually we may do 7 or 8 as a cluster, and this will depend on whether we are going to do 200, 400, or 800 interviews, as to how many we should get on this block go-around. If the block isn't big enough, if there aren't enough homes, we have a formula or a method for taking adjacent blocks and doing adjacent blocks. This is the modification into the probability sampling which must be done in any sample survey.

Now, I think this gets us to the question of the probable error. The theory of probable error requires that absolute randomness must have operated in the drawing of the sample, and absolute randomness doesn't operate in the drawing of any sample.

Now, the formula of PW/N, the square root of that is standard error, requires that we have absolute randomness in the drawing of the sample. Then the formula applies. So far as there has been departure from absolute randomness, the error will be a little bigger, and to find out how much bigger, one can do this—it involves mathematics, but it can be determined. For all practical purposes, however, the standard error as determined by the simple formula is quite applicable, and does give one a feeling that the rating isn't precise to the 2.1, but there is a variance and there is a margin.

Now, to come back to the problem here at hand, we should first realize that experts have gone over this problem. You have a copy of this book [indicating a copy of the Advertising Research Foundation's report "Recommended Standards for Radio and Television Program Audience Size Measurements"], and the experts don't agree as to what it is that should be done. This is a complex field. We are dealing with dynamic human behavior. We are not dealing with a count of refrigerators or even the makes of refrigerators, we are dealing with complex human behavior, and there are many aspects to be measured.

just as, you might say, a stab in the dark—it is just a penciled list. If we take the December reports—and don't send me any bills, because I got hold of the ARB and the Nielsen reports for December; I shouldn't have them, but I got them. If we look down the top 20 programs, we find that the top 20 of ARB include 16 of the top 20 of Nielsen; and the top 20 of Nielsen include 16 of the top 20 in ARB; and if we want to go down to about 24 or 25, we get the 20 of each list in there.

If we look at range in ratings, the 20th in one drops down from 45 to 31; and in the other system from 44 down to 32, dropping decimal points here.

Now, one should not expect that No. 1 and No. 1, and No. 2 and No. 2, and No. 3 and No. 3 should agree, because we have a restricted range. We should be happy that when we deal with the top ones they tend to be the top ones by whatever system we use, yet all the systems are doing it differently.

To go to the next question: These things we supply, these ratings, are said to be affecting the programs which come on television. No. 1, I don't see how they can if we differ with each other so much. Whose system are we going to use to put shows on and take them off? If we differ, then certainly this can't happen. It can't be so.

On the other hand, our clients are buying our services, and I don't think they buy the reports and throw them away; they use them for something, and I think the ratings as such are one tool, one dimension, one factor, one judgment aid which the management or the executives or whoever makes the final determination—it is one of the things they employ in studying and evaluating.

Senator MONRONEY. Do they ever go any further than that?

Mr. ROSLOW. Yes, this is the point I am getting to. Do they go into age and sex, men and women, audience composition—and they do. If you will look in the book, and we have one too, and I wish we could do more business networkwise—from what I understand from Mr. Nielsen there is a great deal of money in the network end of the business—if you look at the book you will find there is always some section in the book that has audience composition by men, women, teen-agers and children, or some such bases. We get orders for special studies in which we could break it down by actual ages, young men or young women, old men or old women. We get some requests to get an index of economic standing—are they the rich or the poor? We get studies in which we go into occupational classifications—are they the professional, white collar, or manual workers? We try to find out, are they the heavy users of the product category or lighter users? If you are advertising breakfast cereal, is the audience the kind of audience that uses a lot or a little of breakfast cereal? All of these things are being done. I don't think we do as much as our competitors in this field, but all of this is being done and passed on to our clients; and here we think is additional information which is being employed in the decisions being made as to whether programs come or go.

In addition to research, there are other decisions being made as to whether programs come or go. Those who buy the programs have some management policy decisions, I am sure. These are the people who should be questioned, anyhow. They have a policy decision as

The experts have issued this book, and the first recommendation which Mr. Nielsen read dealt with the concept of tuning, but if you read further in this book, you will find on page 9:

> Your committee recognizes that no individual measurement can be defined strictly on a tuning basis. For this supplementary standard, therefore, your committee recommends that an "attended sets" concept be applied.

So immediately, the committee has wavered and is making some concessions to some changes that need to be made. If you read further and come to the conclusion on page 25, you read that the foregoing analysis indicates that there are strengths and weaknesses in all the methods. Each method meets some but not all of the standards.

So here is a book—the best brains in our industry have set up standards and finally concluded that no one method can satisfy all the standards. So here we are faced in the competitive economy with several good research companies competing with each other—and I think this is a healthy situation, and it should be so—using different methods of counting, if you want to call it that.

We could count this audience right here by our different methods and come up with a different count. You could count the number of people; you might have to count the number who are awake. This would give a different count. You could count every minute, or a count on how many were here all afternoon. These would all be right. Every count would be right. But you would get different results.

If you want to go into the theater—the concept or parallel was made to the theater. You could count the ticket subs and get one count. You could go in and count the seats, because people do go up to the lavatory, to buy popcorn, and so on. You get a different count. You can count the heads fast asleep, and you get a different count of who is seeing the movie. If it is a double feature and the grade B movie is a poor movie and people walk out, the ticket count is altogether wrong with respect to the grade B movie. If you want to count an average minute, which is the coincidental technique, and find that people come in at the middle and don't stay to see the beginning over again, you get another count again. All of these counts are right.

I look at the situation in this field and see all of these figures different, and we ought to expect that they differ. The next question is, Should they differ very widely, and where does this cry of wide difference come from?

Again the statistician is aware of this. He realizes that people are lining up the top 10 or 15 programs. No one can expect a high degree of correlation or agreement on a restricted range. What about the other 200 programs? Suppose we lined up the 10 last ones, the stingers? I think you would find there is going to be some range of agreement. Everybody will say these are the top 15 or 20 programs; these are the good ones, and I think all the systems will agree these are the pretty poor ones.

Now, I say good and poor, and this needs to be modified. We always use the wrong vocabulary, good or poor in terms of standards of quality or artistic evaluation, but what we mean here is that a lot of people were reported in the audience on one and few were recorded in the audience on the other set.

This has never been taken into account by the writers who write that the ratings disagree, and that we have actually made an analysis

Mr. ROSLOW. The total week's interviewing, and I think I am right, would probably be 5,300 families interviewed or visited in the total week. Now, because we are out every day, and because we have these day parts, doesn't mean that every program gets its rating based on the total sample, but on the subunit association, so that a 1-a-week program, let's say a Monday night program, its rating would be based on 300 television homes; and a strip, 5 a week, would be based on 1,000.

Mr. COX. In other words, the 1-a-week program is simply based on the number of calls you make the following day?

Mr. ROSLOW. For that previous night, so that would be 300, you see. Then on the 5 a week we would be doing 200 a day, 5 days for the day part, so we would build up a thousand for a 5-a-week program.

Mr. COX. You change your sample?

Mr. ROSLOW. We change the sample every time we survey.

Mr. COX. Does this sometimes give you fluctuating results, reflecting difference in ratings from panel to panel, or has your experience been that on this random method of selection you get a relatively uniform reflection of popularity?

Mr. ROSLOW. My own feeling is that our figures don't bounce around. I think we tend to see shows coming up and going down. We have had some occasional fluctuations that must have been a fluke—something in the sampling that went wrong, who would know what—but I would say by far and large you see a general growing of a program or it is coming down—barring competition with a spectacular that comes on, or something unusual in its competitive format.

Mr. COX. Is your sampling done in New York or in the different communities?

Mr. ROSLOW. We do the sample selection in New York and send the block cards to the local supervisor who meets with the interviewers.

Mr. COX. About how many of those do you have across the country—how many interviewers?

Mr. ROSLOW. I would estimate probably close to 3,000.

Mr. COX. What would be an average day's work in terms of numbers of calls?

Mr. ROSLOW. They work from about 4 to 8—well, let's say 4 to 9. There are some that go 4 to 9, that work that 5-hour stretch, and I would estimate that they may be doing 30 to 40 interviews in the course of that period. The rate of production will vary. If you are interviewing in a large city, in our cluster technique with seven interviews to do around the block, they are close together, you don't have much leg time in between.

Mr. COX. Do you attempt to cover the surrounding area?

Mr. ROSLOW. The metropolitan area. New York is 17 counties, as described by the census, for example.

Mr. COX. Do you get any percentage of rejection? In other words, people who will not permit the interview?

Mr. ROSLOW. Our interviewers will do about—they have about a 90-percent batting average. They will go up and down the street and get interviews 9 times out of 10. There are exceptions to this, special situations. If a block contains a hotel, you know that you

to whether they want a variety program, or a comedy program, or a dramatic programs, or a Western. Do they want a children's program, or do they want something which would put them on a high prestige plane—that question came up this morning. These are decisions that are made by either the buyers of programs or the people who are producing and attempting to sell them to buyers; and our information is only one facet or one tool which is used in this connection.

Now, our network report, so-called—and I will come back to this, and then I would appreciate whatever questions you might ask of me—our network report is a composite of 22 basic markets. These are the 22, and you might ask why these 22. They are the 22 in which we are issuing a survey every month, so what we do is take the individual local surveys, and this might be an example of one of the local surveys [indicating], and we just weight up the individual 22 sets of figures on each program and come out with a weighted—statistically weighted proportionate to population—average for each program. When I say 22, even that isn't right, because some programs do not appear in all 22 markets, so one program might have its average based on 18 instead of 22; and all of this has to be taken into consideration in arriving at the report.

Now, our report differs—and why do we do it this way? From our competitors in the field. It differs in that we have this composite average rating, in addition to the audience composition. We have this composite, and then as you turn the pages, you will find we have all the markets listed and the ratings shown across for each program in all of the individual markets.

Now, this, we are told, by people who do have this report, that this is a very handy tool; because they look at this and they find that the average for the show is around 22, but in Atlanta it has a 34, in Baltimore it has a 12. This means I am not doing so well down here in Baltimore; we ought to bolster, maybe buy some spots, or promote the show, or change its time, or we shift. It is that kind of a working tool—from people who have had the report—so it is different. Now, this could be compiled from the other services as well, but it isn't done, and we produce it in this form.

I do hope that I have made some contribution to your understanding of the problem as we see it.

Mr. Cox. Does this use of these clusters—because of the economics of sending out rather than calling, actually getting there and taking time—does this ever produce an undue concentration in a neighborhood, producing a concentration, let's say, of economic categorization?

Mr. Roslow. In the New York report, if you take that report, in a 1-month period we would be in a least 70 different points in compiling the information; so any one program would have its rating based on the interviewers having been in 70 different places.

Mr. Cox. Would it be aggravated as you get into smaller markets?

Mr. Roslow. In the smaller one we would be in at least 20 different markets, the way we work it out. Diversification is an important problem.

Mr. Cox. What would be the sample size, say, in Seattle, Wash., roughly?

are licked. You just cannot do it. If you want to count that as a refusal, we have a big refusal there.

Mr. Cox. Does the formula give them some place else to go?

Mr. Roslow. You cannot interview the hotels.

Mr. Cox. Do you interview once a month, or does that vary from community to community?

Mr. Roslow. We have at least three methods here. The 22 basic markets which we interview every month are standardized as to time. The definition says it is the first week of the month; but there are exceptions even to that formula, because we would skip holidays or special event days. In other words, the July 7 days actually start, I think, either today or tomorrow, in June, so we can get through before the 4th of July; and we could not do it the following week because we would run into the all-star baseball game, and this is a unique kind of situation that is not typical of a normal week. We say that in the 22 basic markets we are surveying the first week of the month.

In all other markets we are on a confidential week, where the week is not known until after the survey has been finished; and that will vary—except the markets we do once or twice a year, and those we are on a 4-week survey where we average 4 weeks together. We interview across 28 days in the month.

There are two philosophies in this situation. Is it better to have a precise week, or is it better to have an average of 4 weeks? From a local point of view, if the service is being used locally, I think it is better to have a 4-week average; and I think ultimately you move in that direction.

As a matter of fact, we are already doing that in Boston, one of the big monthly markets. This is because you get an average picture of a station's performance, of the programs. Locally the major use of the service is in terms of buying and selling local time, and when they buy and sell that local time there is a place for spots and participations. It is not done in terms of 1 week. It is done in terms of buying 13 weeks, or 26 weeks, or some schedule of time; so what you want is an average picture of what the station or the program is doing.

On the other hand, I think from the large national advertiser operating on a network, I think he ought to know precisely what a particular program got—it is all right to know there was a spectacular—rather than have a rating diluted because the other 3 weeks were averaged in, and then you really do not know what has been done.

I think from a national point of view it probably would be better to have a precise week survey. Maybe we ought to get more than 1 week a month and report it that way so one would know exactly what the various programs were doing.

Mr. Cox. About a year ago there was a published statement that you were notifying subscriber stations that you would report, along with local ratings, the existence of special promotional efforts. Have you followed that policy since then?

Mr. Roslow. We have followed that policy and have had more grief than good out of it. That was directed mostly at radio rather than at television, because in the radio field, in the modern era, we have seen stations come on—and, really, our attitude was directed at

a certain kind of promotion. Stations have come in with excessive audience promotion in a survey week, which is not normal for the station. We are really doing research, and I felt it was our responsibility to try and describe what the conditions of the experiment were. This was the point of view. But you find that the stations reply is rather doubletalk; and when a station says: "I have been promoting all year round. This is not anything unusual just now," how can we decide that he was or was not promoting all year round? I could say what he did today, but if it is true he was a good promoter all year around and this is typical of his operations, there is nothing unusual about it. We have found this did not work as well as we thought it would.

There has been this situation, which has motivated us to go on a confidential week, or on a 4-week. At least for 4 weeks, if you promote for 4 weeks, this becomes part of your operation. It is not in for 1 week and out again.

Mr. Cox. Now, you provide in addition, I suppose, for a local market, an annual service; you also conduct special surveys on special order?

Mr. Roslow. We do all kinds of special research—single station, groups of stations, advertisers, agencies.

Mr. Cox. We have been informed that one station which subscribed to your regular monthly survey asked you to make a special private survey on a particular program, and that this latter showed ratings substantially higher than those in your regular report. Now, are these two surveys made by the same people and following the same methods?

Mr. Roslow. It was probably at a different time. This could have happened.

Mr. Cox. The understanding we had was that they were at the same time, in other words, covering the same day, the same program—maybe it is that you present these results in different form?

Mr. Roslow. It could not be. There would be no reason for us to do this. It could not be. It might be another time. A station is being sold, for example, and here we are in a market where we are only on a quarterly system; we report a survey once every 3 months. And a new operator comes in and changes the programing format, and goes in with audience promotion and says, "I can't wait 3 months. I made all theses changes and don't want to wait 3 months, so let's have another survey." This we would do. We would invite all the stations in the market to participate as we do in every survey. They may or may not participate, but I do not see—I am sure there is something wrong about that. We would not have two surveys made for the same program at the same time, two different samples. It just could not be done.

Mr. Cox. In other words, if he wanted specific or special information about this one program, unless there were something of that sort in the picture, you would simply extract it from your regular survey?

Mr. Roslow. Of course.

Mr. Cox. Now, we raised with Mr. Seiler a question something of this sort—but it is something which has been discussed in the press, and so on, and in other reports received by the committee—as to contact between the rating service and the client, in the nature of a com-

plaint about the rating you did give him, or an expression of hope about the rating you are going to give him. Is this a problem, or is it restricted to a relatively small percentage of your clients, or what is the situation so far as client contact on their degree of satisfaction with the rating is concerned?

Mr. Roslow. Well, we have had many—in the year we have been surveying, we have had many purchasers of our surveys who have not liked the results, and who have maintained that we were wrong, that it could not be. Then they will turn around and buy a survey from another research company hoping the picture could be different. This might be 6 weeks later, with a change in programing, and maybe you do get a difference. This happens all the time.

Mr. Cox. You maintain the basic data in your offices, available for examination by your clients in case they raise questions?

Mr. Roslow. They can come up and see the stuff, sure.

Mr. Cox. And is the collation of all of this material collected, say, in Seattle, done there, or is it done in your headquarters in New York?

Mr. Roslow. It is all done in New York. All the questionnaires are first class mailed every night, as the interviewers finish, to New York.

Mr. Cox. I asked Mr. Seiler, and I have the same question as far as your ratings are concerned: Is there any final adjustment made when you get down to—you take all this in and put it all together and you come up with this figure. Is there then a check against your prior ratings, or is there a check against the ratings, in this market, of other services? Is there ever a determination that something must have gone wrong, so you should make an adjustment here?

Mr. Roslow. No, there is no comparison with the other services. Every report we do is an individual result from this new interviewing. We do not have any moving averages. We are now employing the not-at-home—but it is a mathematical factor for not-at-homes, counting them in as nonviewers— much the same as Mr. Seiler described in the vacation situation; but all of it is mathematical.

There is no other—otherwise it is a straight tabulation and the percentage of questionnaires.

Mr. Cox. Did your service once giving a rating to a television station in Houston, Tex., on an evening when it was not on the air? We have had a report to that effect.

Mr. Roslow. San Antonio, I think it was. It was not off the air. I think there was a shift in program. We had the President on the air when he was not, or it was the other way around, when we had a rating, a fairly substantial rating, for a program that was not on the air.

It was a rating when the station was off, because it was a special program, and its length could not be predetermined. I think actually it was a Presidential speech at the time which ran 30 minutes instead of 45—or some situation like that— and we had a rating going a quarter-hour beyond.

Well, we are dealing with a dynamic thing, people, and we cannot get precise estimates of time; and if the program ended 15 minutes earlier, and some of these people reported they were with the program until it ended, and the advance log was incorrect and we did not get a correction on that, we would have a rating on that next quarter-hour.

Mr. Cox. The interviewer applying——

Mr. Roslow. Applying the technique is getting the best response. That did happen in San Antonio, yes. But that has not happened often in 17 years of experience.

Mr. Cox. What training do you give your interviewers?

Mr. Roslow. Our interviewers are housewives—I would say ordinary housewives. We do not want mental giants. We learned we cannot use college students. They are high school graduates. We get them from women's clubs, churches, community organizations—women who want to earn some additional earnings.

I think we still must have—we had more, but we still have—some husband and wife teams, veterans. We had more a few years ago who were going to school and they would share an assignment with their wives.

We train them. Our national supervisor—if we are going to start Seattle tomorrow, our national supervisor would be there. We would have leads on a local supervisor from friends in the research business. "Who does your research in Seattle? Is she available to come and do some work for us?" And we would locate a supervisor who would come recommended to us. We would find out if she is suited, if she can handle our work; if she has no relationships, if her uncle is not a broadcaster or something of that sort; and our supervisor would work with her in setting up the procedure.

She would recruit. They could go out, double interview, practically, and the staff would be enlarged; and it would be a going operation after that.

Mr. Cox. You supply them with the form to be used?

Mr. Roslow. We supply the questionnaires, with instructions with the rosters, and so on.

Mr. Cox. Do you ever detect any faking on their part; in other words, completion as if a visit had been made?

Mr. Roslow. Well, we have a verification that goes by mail from the home office. We send a card out, first-class mail, to a sample of the interviewer's work so that we know. The card comes back and describes the interview and says, "Yes, we were or were not interviewed." This is one form of supervision. Another form of supervision which we have—and I should make the observation that in research it is necessary to supervise and verify the work of your interviewers, and it is not possible at all times in all phases of this activity. In the personal interview, we do.

In addition to that, our supervisors, knowing where the interviewers are working—they have the block cards and have assigned them—will be out each night and be able to verify and spot check, spot an interviewer at work in a given block where she is supposed to be, see that she is there, and get behind her.

We have another good form of verification, and that is people get interviewed in the industry, and they frite us and tell us what has happened; and some of them complain and say the work was hurried, and sometimes it has been.

We want to know this, of course; but I say on the whole we get some nice letters from the people in the industry that were interviewed and tell us about the experience they have had.

Mr. Cox. If you decided to rate Seattle, and had gone there, would you then have a permanent body of employees?

Mr. Roslow. Yes.

Mr. Cox. As long as you operate in that market?

Mr. Roslow. There would be turnover. They would work that 1 week that we do our fieldwork; but we do a great deal of other research, so there is good likelihood that some other time during the month they might be out on other surveys for us.

Mr. Cox. When you make this interview, is there an effort to get a response from the entire family, or do you normally deal with one member of the family?

Mr. Roslow. We don't interview before 4 o'clock by intention, because we do want to get to the homes when they will be occupied, the highest degree of occupancy.

Usually, we try to get a group interview; you must realize what we are doing. If we start at 4 o'clock, this is probably just the function of the housewife, and maybe the kids back from school, so they are there and can take part in the interview.

At 6 or 7 o'clock, talking about last night, this is by intention. Dinnertime is a hard time to interview, but this is when you find people at home, so we can get three or four people—husband, wife, children, and grownups—to join in the interview and attempt to get a fairly complete report.

Mr. Cox. Do you ask them, at that point in the day, different questions than you ask them in the late afternoon?

Mr. Roslow. That is right, because we have broken the day in parts. In any one interview we are only covering a specific segment, which may be a previous 6-hour or 8-hour period, or in some of the smaller markets it might be all of today. The only thing overnight would be last night, but this again would be in a different home. In any one home, we only do one segment of time, depending of how we have broken the day, whether we have a two-roster or three-roster period. We may have broken the day from 7 to 6, or 6 to 10. All of this would be determined as we review the situation.

Mr. Cox. You don't, in one home, try to rate the whole day?

Mr. Roslow. No; it would be today or last night.

Mr. Cox. Do you have a problem of finding a home with the husband not there—he is out that evening—and there is difficulty accounting for what he may have done? They think he was watching television last night, but nobody is quite sure what he was watching?

Mr. Roslow. That will come up. We will get records. "We know the set has been on; John was there, and did have it on, but I don't know what it was." It will go into miscellaneous—set in use, but we don't know what it is, and it will just be in the miscellaneous category.

Mr. Cox. Would you send us a sample questionnaire, one of these documents that the interviewer would have?

Mr. Roslow. Yes, I would be glad to do that.[5]

Senator Monroney. You find "Gunsmoke," "Restless Gun," "Perry Como," "Tales of Wells Fargo," "Wyatt Earp," and "Loretta Young" are most popular with Washington viewers, rating above 27.9, while the politicians on "Meet the Press" only rated 9.9, "College News Con-

[5] These materials were supplied and were placed in the record on July 1, 1958. They are set forth below in an appendix following the conclusion of the testimony for this day.

ference," 3.2, "Face the Nation," 3.2, and even "NBC News," Monday through Friday, 8.7.

Mr. Roslow. I have but one observation: I think I am right, that the biggest box office in the movies is a western. I think it is John Wayne. Across the country this is the perennial biggest draw in the movies. I don't think, knowing this, we should be surprised by these results.

Senator Monroney. I was wondering about Washington being sort of a country town on politics, they like "Restless Gun" and "Gunsmoke" better than they do the heavy programs that are piped in in great abundance on Sunday afternoon.

May I ask one question: Have there been any tests made as to relationship between the view of the program and whether or not they like the thing they were looking at? Is it automatic that if it is pretty punk, they will turn it off? Or do they get to be television zombies and just sit there, because they know there is no use to fish around and look for anything else better?

Mr. Roslow. We have asked questions on likes and dislikes. You have a difficult problem in trying to ask people to give you an idea of programs they would like to see that don't exist, because most of them haven't got the necessary imagination. It takes a creative person to come up with a program idea. You don't get very much productive replies in terms of "What would you like to see," that isn't around. But you can get, and do get, likes and dislikes of what they are watching.

Senator Monroney. You do get that?

Mr. Roslow. On special studies.

Senator Monroney. Do you have special percentages on those that did stay through the whole evening, whether they liked or disliked what they saw?

Mr. Roslow. I don't think I could generalize on that.

Senator Monroney. They used to have these sneak previews on movies, before they would be released; and then as you went out you checked whether you thought it was a good or a bum show.

Mr. Roslow. Well, I can tell you that for a network, with respect to two shows, we had the story theme of what the shows were going to be and we constructed a set of questions. We then asked a sample of homes, in an earlier interview: "Are you going to be home; would you mind watching this program?" These questions were in a sealed envelope. We asked them not to open the envelope until after they had seen the show, and then open the envelope and answer the questions. And we came back after the end of the show and collected these envelopes, analyzed that, and turned it over to the network involved—and presumably they made some changes in the plot or theme and the way the show was going. One show survived with low ratings. One show did not. But it didn't do the network very much good, because the next year that show switched to another network, where its rating doubled immediately—simply by change of network, regardless of all the research that went into it.

Senator Monroney. But as a psychologist, you at least consider that the likes and dislikes, or retention or memory of the program, is important in the impression of the television viewer; that is the part where you differ from the automatic devices.

Mr. ROSLOW. The advertiser depends on that, too. Because the whole theory of advertising is that you get your commercial across in a pleasant mood; and then when you go to the store, this pleasantness carries over, so you are more likely to reach here than here when you see all the brands listed.

Senator MONRONEY. We have heard practically nothing today except what you said just now: That the advertisers who buy these services have not been interested in whether the customer was pleased with the program. The mere fact that he stayed on that station is conclusive evidence, for the advertiser that the viewer approved the program.

Mr. ROSLOW. I wouldn't go along with that as such a general thing, no.

Senator MONRONEY. Isn't that the whole basis: The set was on, it wasn't turned off; and therefore it must be a popular program?

Mr. ROSLOW. I wouldn't go along with that. Here we have 150 people in our company in the New York office at work; and I can go to an agency, or any of the large advertising agencies in New York, and they have more than 150 people in the research department, and I know they are doing other research that gets at these problems.

Senator MONRONEY. But none of the people—except on your sealed envelope arrangement—has asked: "Do you think the program is of good quality? Do you like the program?" We all presume that because the set is on—and maybe they just bought the set and are making payments on it and figure they have got to use it. But it is a question of likes—are they going to like toothpaste because of the flavor? If they don't like that flavor, they can buy another. If Pepsodent drops off and Ipana picks up, everybody on Madison Avenue gets excited about it.

I wonder if they have any yardstick on the acceptability of the program, other than the fact that the set is on and the owner is looking at something. I have a friend, an NBC affiliate, who happened to get on the air years before the CBS stations did, and I have dozens of friends who turn their set on channel 9 out of force of habit and listen and listen to that and never get up and switch to the other station; and you do get an audience by habit.

Mr. ROSLOW. You do; that operates, also.

Senator MONRONEY. They just take it in stride and sort of go ahead and maybe read the paper; and look up now and then to see if anything interesting is coming on.

Mr. COX. Do you ever measure the degree of attention to the program? I take it in these two instances you used, they have been measured.

Mr. ROSLOW. We have done commercial remembrance.

Mr. COX. Sponsor identification?

Mr. ROSLOW. It is the same sort of thing. This is the only way you can do it. You must wait until they have had a chance to see the program. If you try to do it on the telephone, you don't know whether the commercial has yet appeared. You have got to do it at some standard time, where everybody is asked the question at some fixed time after they have been exposed to the program. We have done that, and come up with indexes of how many people remember seeing the commercials in the program.

Mr. Cox. Do you sometimes get an indication from that sort of test that on this particular program, which may be sandwiched in between two more popular programs, there was still considerable evidence that the sets were on, but there seems to be a marked reduction in the degree of remembrance with respect——

Mr. Roslow. Well, the variation is great, and I don't think we can get any simple answer. It would be nice to say that the relationship between the commercial remembrance is perfect with the size of the audience, but it is not. There will be variations; and this is a function of the kind of program as well as the function of the commercial itself, as to how it is going to be remembered and retained.

Mr. Cox. Your service doesn't measure what goes on within the time segment, it simply measures the fact that they recall having watched the program?

Mr. Roslow. Recognize it on the program log.

Mr. Cox. You don't measure whether one program may hold them for a full half hour, and on the other, they may be in and out of the room?

Mr. Roslow. We can't, on this type of interview, get that finely channeled.

Senator Monroney. I think in your top 20 you have "Gunsmoke", "Perry Como", "Playhouse 90", "Have Gun, Will Travel", "Restless Gun", "Wells Fargo", "Line-Up", "Groucho Marx", "Alfred Hitchcock", "I Have a Secret", "Cheyenne", "Climax", "Red Skelton", "Phil Silvers", and "What's My Line"—do you listen to any of these regularly?

Mr. Roslow. I watch some of those; yes.

Senator Monroney. Do you rate them in your own mind, your favorites, according to the top 10?

Mr. Roslow. I don't. My favorite is "Have Gun, Will Travel". What is it in that list?

Senator Monroney. That is No. 5.

Mr. Roslow. I would make the observation that there is a list, and there is quite a variety of programs in there. While it is true you have some westerns——

Senator Monroney. It is pretty heavy on horse opera.

Mr. Roslow. Out of let's say 200 programs, there is a pretty good variety in there.

Mr. Cox. Wouldn't it be true that a year or two ago you would not have found that heavy sprinkling of westerns?

Mr. Roslow. We would have found "$64,000 Question," "The Challenge"——

Senator Monroney. But doesn't that indicate the sheeplike adherence of Madison Avenue—that the more westerns you have on, the more the control of the screen the horses have, and then obviously that is what the audience is going to see? If you have got 50 horse shows instead of 5, then the top 20 is going to be heavily loaded with that type of thing. Don't you magnify your percentage by the very sheeplike habit of trying to imitate everybody else's program.

Mr. Roslow. Well, this is true all over. Don't all the shoe stores line up next to each other? It seems to me you try to get where the traffic is.

Senator MONRONEY. I thought this was the entertainment field. There is nothing so bad as hearing the same funny story told by every politician that gets on the stump. Probably that has defeated more politicians than anything else. [Laughter.]

Mr. ROSLOW. The answer to that, I think, is more facilities; because you always have these creative people thinking up program ideas. We had the year of the quizzes, we have had the year of the westerns, we have the era of the dramatics and comedians—it seems to go in cycles.

Senator MONRONEY. Because one show is good, you don't want to see five every night. That is the thing they seem to forget. They are wedded to these ratings; they say nobody is looking at anything except horses, so everybody jumps on that type of show—and it keeps coming up for a long period of time.

Mr. ROSLOW. You don't get all high quality, and those that don't have it ultimately go. "Colt 45" has vanished, that one I remember.

Senator MONRONEY. Maybe some of these others will bite the dust, but it would seem to me there is a duty—not from your standpoint, you are a reporter—but there is a duty to the 43 million television set owners, and somebody ought to take a poll: "Are you bored with your present television fare", and find out. We have only one question: "Is the set on". The television habits of our children, our wives, and all of us are going to be forced into these molds. They haven't got anything else to do that night, so, good, bad, or indifferent, they dutifully look at the stuff that comes across. It seems, with all the millions being poured in it, somebody would ask: "Did you like this program?"

Mr. COX. The television critics tell them it isn't good programing, but they seem to be outvoted on this matter, because the people who decide what kind of program is going to be provided listen to the services rather than to the critics on the matter of what will be popular.

Mr. ROSLOW. I think I ought to submit these as evidence that this kind of research does go on. Maybe there isn't enough of it, but there is research that gets to the kind of programs that people like. And I feel certain that we are not doing all of it; that this must be going on, and broadcasters must be using this kind of research in addition to ratings.

Mr. COX. I recall vaguely a survey that someone made in which they went back and asked people to name the television programs which they had liked best—not the ones that they like best now, but the ones that they like best since they had been watching television—and that, by and large, the programs which they listed was the so-called quality programs, which the critics had liked, but which had left television because they did not pull the top ratings.

Do you recall such a survey?

Mr. ROSLOW. It could be something we did, but the way you describe it, it doesn't ring a bell. I will track down my files and if I can, I will submit it.

Senator MONRONEY. Thank you, Mr. Roslow.

Mr. Jay, thank you for coming down. Do you have a prepared statement?

Mr. JAY. No, I do not.

Senator MONRONEY. Do you care to make an oral statement?
Mr. JAY. Allan Jay is the name. The service is Videodex.

STATEMENT OF ALLAN V. JAY, VIDEODEX, INC.

Mr. JAY. We operate a diary panel, which I will explain in more detail. We began reporting in 1949—first as a market research organization doing work for TV set companies, who wanted to determine the characteristics of people buying sets. In other words, the initial sets were presumed to be going to high income homes, which would involve higher purchasing power. This was found to be not too much the case, and one of our means of getting at this was through the examination of TV set purchase records or warranty cards. These cards continue to be our means of identifying a known group of TV-owning homes, which has since served as our sampling base.

In conjunction with the use of the TV set purchase records, we began to use a diary. The diary was acknowledged as a vehicle to give us a multiple-county base, so that we could get greater projectability for our data. At the same time, it would give us a measure of who was viewing, which other techniques could not produce; and at the same time give us an opportunity to measure trends through time.

Since 1949, until the transcontinental cable interconnection, we reported 17 markets each month, and those were the markets that were connected on the coaxial cable. We issued a monthly report on sets in use, ratings, shares of audience, viewers per set, and audience composition—broken down by men, women, teen-agers, 12 years and below—for all telecasting from signon through signoff.

In August of 1950, we began to issue a national report which we have issued each month since then. This breaks down the sets in use by quarter-hour period, the ratings, the homes reached, the confirmed number of cities that carry the telecast.

In addition to the work on national and local ratings, when the postfreeze era began, we issued a report on conversion. I cite this additional study, because just to be regarded as a rating service, as such, is perhaps a limitation, to the extent that there is a broader base of services available still within the realm of broadcast audience measurement.

The UHF conversion study reported the range of counties served by these UHF channels, the level of sets that had converted to them, and also the reception quality and the channel viewed most. This was augmented about 4 years ago by the same type of measures for secondary VHF originating counties. This type of study enabled us to be really in a more informed position as to how far out these various channels went. The usage of the warranty card enabled us to precode homes on a county basis, and to know in advance how long they had owned their sets, so we could get a sample distributed on a multicounty basis and stratify this portion by date of purchase through time, both being sampling advantages.

The usage of a diary in conjunction with this was further considered—just how it should be administered. Alternatives open to us were a one-time usage of a diary, a discontinuous sample, or a multiple-time sample, which would give us an opportunity to measure trends within a relatively constant base of homes.

Upon examining the data we received, we found that the initial diary return from newly recruited homes gave us certain observable biases—such things as disproportionately large amount of hours viewed per week; the fact that we would just get the most cooperative homes, and therefore give an upward bias with respect to total amount of viewing done; at the same time, on 5-day-a-week shows, we would get no real evidence of turnover or cumulative audience. On the other hand, there would be constancy on a Monday-through-Friday basis. There was a tendency to high-name-type shows which led us to reject the use of the initially returned diary.

The reason we use homes for a 7-week span—and these are the first 7 days of 7 consecutive months—and reject the initially returned diary, is because of some of the features I have just cited. We are not really trying to—we are trying to maximize, really, the usefulness of the diary technique. In doing this, the ability to measure a cumulative pattern within a relatively basic group is preserved by a time sample, of value so far as the seven-time recording is concerned.

Mr. Cox. Do you tell the diarykeeper that the first one is not used?

Mr. Jay. We don't tell them that. We use that as a dry run to qualify the reporting of the initially newly recruited home.

Mr. Cox. Do you check these to see if there are defects, and then try to correct it?

Mr. Jay. Defects tend to repeat themselves. There are about 17 categories of what might be called repetitive types of influences observable from the first-run form; and again, in addition to not having a complete base of homes the first time, we want to go back to the noncooperative, nonresponding homes two more times before we give up on them. As other services have cited, you don't get 100 percent of the homes you approach; but by not depending upon the initially returned diary, we have an opportunity to go back to those homes, which we do.

Mr. Cox. What percentage of the diaries that are returned are unusable?

Mr. Jay. Out of 100 homes that we would approach, if we were to use them the first time, we would be able to use about 6 out of 10. As a result of going back to the nonresponding homes and again using the subsequent diaries from those that did have these observable biases the first time, we are able to recruit upward of 80 percent of our initially selected group.

Mr. Cox. Where they are cooperating and returning the diary, are further diaries mailed to them, or delivered in person?

Mr. Jay. The diaries are mailed to them, and there is an interview telephone check to be certain that they did arrive and they had no questions about them.

Mr. Cox. Do you make any check in the middle of the keeping of the diary, such as Mr. Seiler indicated?

Mr. Jay. On a subsample basis, on a validating approach, we have broken in during the reporting week on a subsample of the homes to find out if there is lag between the viewing being done and the last record made in the diary, itself. From a historical standpoint, I believe it is rather well agreed that no service is completely free from bias, and one of the limitations in the diary technique is the suspicion of lag between viewing and recording. One means that we have used in addition to the break-in, as far as observing the bias that might ex-

ist, has been to add additional columns on our diary form, which I believe you will notice from the sample we did submit. This gets into some qualitative fields as to the opinion of the program, the reaction to the commercial—which we didn't produce on a published basis at first. But what that did was to make the line of least resistance, in keeping the diary itself, for the respondent to fill it out at the time the viewing was done, because the additional columns did not require that much more time—and it did give us a measure, really, if there was any reporting bias, such as the fact they might rate a sustaining show as having a good commercial, or a feature such as that.

Again, this does not completely eliminate the bias of the diary technique, but it does much to minimize it.

Mr. Cox. You indicate in the reply to Senator Magnuson's letter that you give a premium. Are they advised in advance that they will have this premium, and its approximate nature?

Mr. Jay. There is a premium brochure sent which gives about two dozen items, from which they have a range of selection for their multiple-time cooperation. This had been a matter of our effort to minimize the nonresponse factor at first, and it later developed into a productive avenue of revenue for us, to the extent that many advertisers, in testing self-liquidating premium items, would have us take certain items from them and print them up in our premium brochures and then return to them a tabulation of the frequency with which certain items were selected by given groups of homes, which they could cross tabulate against the types of homes.

One of the advantages, again, getting back to the use of the diary itself in a multiple-time sample, is the opportunity to break up the viewing as against certain of the so-called economic types of classification data which other services have cited. This is particularly important with us, because our service was the first service to use a diary technique on a syndicated continuing service.

Our reach, since then, has been primarily with the advertiser, which I believe you will observe from the information we did submit. We are trying to do more than just deliver a pocket piece on program rating, size, and quality, as such. We are trying to offer them the facilities of special tabulations which wold otherwise require special machinery being set up on their part were they to try to obtain it themselves.

Additional information that can be obtained runs along the line of audience turnover, audience flow, not as finite as that obtained through an electronic-type tape, but within a multiple 15-minute segment, itself, information of a decisionmaking value.

Mr. Cox. Do you get diaries that have been obviously filled in by various members of the family, including the children?

Mr. Jay. We do observe different handwriting on the dairy, itself. I think that is a common experience.

Mr. Cox. Do you think children are more faithful in recording than the parents?

Mr. Jay. That would require insight as to whose handwriting is being used. Random checks have been made through other techniques that have already been cited, so-called suspicion-time periods. In other words, one of the hypothesized limitations of the diary itself has been the overstatement of children's type shows, during B and C

time periods, from a station classification standpoint, where all adult members might not be in the home; and the only way to test against this is by alternative techniques that would measure the same time periods, and the differences that we have been able to observe—both by published results from other sources as well as those that we conducted ourselves—has not been to observe any significant bias or difference between the two.

Mr. Cox. Is this national service that you maintain—that is based on a sample of 9,200?

Mr. JAY. That is correct, and here is the type of report [indicating] and the list of the markets, which I will leave with you.[6]

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[6] The markets used for the April 1958 TV network ratings are:

Abilene
Ada
Akron
Albany, Ga.
Albany-Schenectady
Albuquerque
Alexandria
Altoona
Amarillo
Ames-Des Moines
Anderson, S.C.
Ann Arbor
Asheville
Atlanta
Augusta
Austin, Minn.
Austin, Tex.
Bakersfield
Baltimore
Bangor
Baton Rouge
Bay City-Saginaw
Beaumont
Bellingham
Billings
Binghamton
Birmingham
Bismarck-Dickinson
Bloomington-Indianapolis
Bluefield-Oak Hill
Boise
Boston
Bridgeport
Bryan
Buffalo
Burlington
Butte
Cadillac-Traverse City
Cape Girardeau
Carthage (Watertown)
Casper
Cedar Rapids-Waterloo
Champaign
Charleston, S.C.
Charleston-Huntington
Charlotte
Chattanooga
Cheyenne
Chicago
Chico-Redding
Cincinnati
Cleveland
Colorado Springs-Pueblo
Columbia-Jefferson City
Columbia, S.C.
Columbus, Ga.
Columbus, Miss.
Columbus, Ohio
Corpus Christi
Dallas-Fort Worth
Danville
Davenport-Rock Island-Moline
Dayton
Decatur, Ala.
Decatur, Ill.
Denver
Detroit
Dothan
Duluth-Superior
Clarksburg
Durham-Raleigh
Eau Claire
Eldorado
El Paso
Erie
Eugene
Eureka-Medford-Klamath Falls
Evansville-Henderson
Fargo-Valley City
Fayetteville, N.C.
Florence, Ala.
Florence, S.C.
Fort Dodge
Fort Myers
Fort Smith
Fort Wayne-Roanoke
Fresno
Galveston-Houston
Glendive
Grand Forks
Grand Junction
Great Bend
Great Falls
Green Bay-Mariette
Greensboro, N.C.
Greenville-Washington, N.C.
Greenville-Spartanburg, S.C.
Harrisburg, Ill.
Harrisburg, Pa.
Harrisonburg
Harlingen-Weslaco
Hartford-New Britain
Holyoke-Springfield
Hutchison-Wichita
Idaho Falls-Twin Falls
Jackson
Jacksonville
Johnson City-Bristol
Johnstown
Joplin
Kalamazoo-Grand Rapids
Kansas City
Kirksville (Ottumwa)
Knoxville
LaCrosse
Lafayette, Ind.
Lafayette, La.
Lake Charles
Lake Placid (Plattsburgh)
Lancaster
Lansing
Laredo
Las Vegas-Henderson
Lawton-Ardmore
Lebanon
Lexington
Lima
Lincoln-Holdrege-Hastings
Little Rock-Pine Bluff
Los Angeles
Louisville
Lubbock
Lynchburg
Macon
Madison
Manchester
Marquette
Mason City
Memphis-Jackson
Meridian-Hattiesburg
Miami-Fort Lauderdale
Midland-Odessa
Milwaukee
Minneapolis-St. Paul
Minot
Missoula-Kalispell
Mobile-Pensacola
Monroe
Montgomery
Muncie
Nashville
New Haven
New Orleans
New York
Norfolk-Hampton-Portsmouth
Oklahoma City-Enid
Omaha
Orlando-Daytona Beach
Paducah
Panama City
Parkersburg
Peoria
Philadelphia
Phoenix-Mesa
Pittsburg, Kans.
Pittsburgh
Poland Spring
Portland, Maine
Portland, Oreg.
Presque Isle
Providence
Quincy-Hannibal
Rapid City
Reno
Richmond-Petersburg
Riverton
Roanoke
Rochester, Minn.
Rochester, N.Y.
Rockford
Rome
Roswell-Carlsbad-Clovis
Sacramento
Salinas
Salisbury
Salt Lake City
San Angelo
San Antonio
San Diego
San Francisco
San Jose

(Footnote continued on following page.)

Mr. Cox. That is—I am not quite clear about your selection of the sample. This is from television sets sales records?

Mr. JAY. Right.

Mr. Cox. Have you kept a continuous record from sales made 8 or 10 years ago, and you are drawing now, not from the most recent sales, but from sales over the entire period?

Mr. JAY. That is correct. If 10 percent of the homes in a given market have owned their sets for 6 years or more, 10 percent of our sample as of that time will conform to that type of pattern. It is not just a most recent user's type sample.

Mr. Cox. Do you make any effort to survey viewing in places other than private homes?

Mr. JAY. No, we do not, at least as far as our syndicated service is concerned. We have conducted special studies, but as far as our standard report, the TV household base is the unit of measurement.

Mr. Cox. Do you have a fairly standardized margin of error such as has been described by the other services?

Mr. JAY. The sample sizes, the range of error, the other statistical tools of analysis that have been applied by people working with the data and by organizations producing it would apply in this case as well.

Mr. Cox. Do you publish this?

Mr. JAY. It is supplied to everyone who receives our reports. It is not put in the published report in this form; but as part and parcel of their usage of our data, that information is supplied.

Mr. Cox. Do you think that proper use of your data by your clients would require that they take account of that in the representations that they make?

Mr. JAY. That is true. In policing the interpretation of the data there should be qualified research personnel able to evaluate and assess the results, within the various competence levels and area ranges produced. However, I might stress again the fact that most of our clients are advertisers, and to this extent a lot of the usage and dissemination of the data are not as apparent as if they were broadcasters who, in receiving information of this type, may make promotions. When we do studies based on standard data and special studies based on the reporting information, this is confidential to them, and oftentimes the agencies that serve the account aren't even aware of the usage of our report.

This does a number of things. One thing is to lessen the name identification of our company in comparison with services that might be more used by the people who promote the broadcast facilities themselves.

(Footnote continued from preceding page.)

San Luis Obispo
Santa Barbara
Savannah
Scranton-Wilkes-Barre
Seattle
Sedalia
Shreveport
Sioux City
Sioux Falls
South Bend-Elkhart
Spokane
Springfield, Ill.
Springfield, Mo.
St. Joseph
St. Louis
St. Petersburg-Tampa
Steubenville-Wheeling
Stockton
Syracuse
Temple-Waco
Terre Haute
Texarkana
Thomasville (Tallahassee)
Toledo
Topeka
Tucson
Tulsa
Tupelo
Tyler
Utica
Washington, D.C.
Waterbury
Wausau
West Palm Beach
Wichita Falls
Wilmington, N.C.
Winston-Salem
Yakima
York
Youngstown, Ohio-Newcastle, Pa.
Yuma
Zanesville

Senator MONRONEY. I notice in your diary you ask, in addition to the programs viewed, the number of viewers, and also whether the program was excellent, good, or fair.

Mr. JAY. That is right.

Senator MONRONEY. I see you sell only 1 percent of your service to the television network. Are we to presume from that they just don't care?

Mr. JAY. Well, no. This information was not published by us for about 3 years. We used it in order to make the diary keeping as efficient as possible, and I explained, as far as the amount of information making the line of least resistance on the part of the respondent that of filling the diary out coincidental with the viewing, itself.

Users of special qualitative fields of information—firms such as Swearen, Gallup, and Robinson, and other so-called qualitative research companies—supply syndicated services with much this type of information; and upon learning that we had this basic information a number of our advertiser clients asked us to put it out under separate cover, recognizing that this is subjective information—it does have opinion bias; what is good to one person is not good to another, and to composite that does not necessarily render the composite a meaningful level of information, except in the relative sense. In other words, the standards of interpreting the data must be taken into account in observing the whole realm of programs reported.

If you like, I have a sample of that report which I would be prepared to leave. It is not a part of our service which we have openly declared as a standard rating report. It does contain our audience composition breakdown, which is a standard part of the report, but these other qualitative columns are just a subsidiary part of our reporting, and the usage of them is really again maximizing the value of the diaries, as a vehicle in reporting, to break out both quantitative as well as qualitative fields of information. I cite that because one of the services, perhaps the major service in our field, will embrace the diary only in an indirect way to augment the sparse distribution, you might say, of the senior technique being used; and thereby, with electronic devices plus a diary, have a so-called combination recorder and diary technique.

Our whole approach has been the usage of a diary in and of itself, enabling national and local data to be produced from a comparable source; and this becomes important when you take into account regional and sectional differences on a network property, or a multiple market show, where you are going to compare extremes. This may differ as the function of time zone, size of market, number of channels in the market; and the more local data you can produce, the more meaningful the interpretation of the network data will be, particularly from the same source.

This is important now, as you probably realize, in the allocation of TV facilities—UHF, community systems, satellite stations, and the rest—insofar as it is a function of market size. When you get down to B, C, and D markets you have varying program situations. Our top market, of course, preserves the Trendex type of qualifications, which would be live service by three of the major networks, but when you get down to some of these markets that major network shows may not go in, or go in on a delayed basis, or with strong independent

stations, here the situation in Kalamazoo becomes separate and distinct from another market of that same size, perhaps in the same time zone with the same number of channels—and this is where the amount of local data is a valuable tool in interpreting the performance of a network show.

Mr. Cox. Do you feel that any additional element of accuracy is afforded by Nielsen's use of this Recordimeter as a mechanical reminder to the diary keeper and as a check on total time elapsed?

Mr. JAY. From an objective standpoint, looking back on the Nielsen data in the past—and when I worked for an advertiser we used the Nielsen data—the information that was produced at first was based on the fact that the Audimeter would give a completely unencumbered means of measuring tuning within a given home. The use of a diary was at first discounted by the same company that uses this technique, the Audimeter, as a means of stating that the diary then being used by other services, including ourselves, invited certain conditioning factors. In other words, the usage of a diary might cause them to view more. On the other hand, through time the diary itself may cause them to use television less, as a function of fatigue. Both of these hypotheticals we had tested against to find if on an average hours-viewed-per-week basis, or other means of internally examining the information, if that did exist, it would express itself, and less hours per week is a function of time they had served.

In answer to your questions, the intial representation by that company was the fact that there was a conditioning factor. It would be my opinion—not having seen the recordimeter and the audilog data enough to draw any kind of generalization to even form an opinion on it—would be that if this conditioning hypothetical did exist in their minds, which is the reason for their not embracing the diary technique, then the usage of these other things would seem to even excite that bias. This is just an opinion on our part.

If you are within the environment of the set, itself—again I have no observable data to conclude this from an empirical standpoint, or any other—but based on representations to the market, and based on subsequent use of it, I don't see how a wand of purity has been waved over a bias which did exist and now seemingly has been relieved.

Senator MONRONEY. Thank you very much, Mr. Jay, for coming down to give us the benefit of your experience.

The next witness is Mr. Alfred Sindlinger, president of Sindlinger & Co., Inc. Thank you very much for coming down, Mr. Sindlinger. We appreciate your waiting around today to give us the benefit of your testimony.

STATEMENT OF ALBERT E. SINDLINGER, PRESIDENT OF SINDLINGER & CO., INC., OF RIDLEY PARK, PA.

Mr. SINDLINGER. I have enjoyed it, and I will make it brief because the hour is late.

I am obviously grateful for the invitation to come here.

In 1949 and 1950, we experimentally operated an instantaneous electronic rating system in Philadelphia—this was called Radox.

Since then, we have expanded our operation to a nationwide basis, and cover many facets of people's activity in our daily—every day of

the week—interviewing. For the past 3 years, we have averaged more than 1,000 different interviews daily—we have interviewed nearly a million different Americans.

As you have heard today, there are four recognized methods in use today to gather broadcast ratings: (1) The electronic or mechanical attachment to a set, (2) the diary, (3) the coincidental telephone call, (4) the personal interview.

We are not here today to quarrel or find fault with any of these methods or techniques. However, we don't at the present time use any of them.

Our concern, based upon our daily contact with the public, is the current use and interpretation of the broadcast rating concept and its consequences. The broadcast rating, as it is being used today, in many quarters, is wrong for everybody—and I emphasize many quarters, not all quarters, because the sophisticated people do understand what they are talking about. But I am talking about the people that don't understand what they are talking about; the people that don't understand the textbooks, who have to work with simple language.

We think the rating concept is wrong for the network and the station; it is wrong for the artist or creator; it is wrong for the advertiser, who makes free broadcasting possible; and it is wrong for the public.

The fundamental problem with the broadcast rating, as it is being used in many quarters today—and we are sure all of the researchers here today will agree with us—is this: The broadcast rating—where it is used to measure only the size of an audience has only one dimension.

The "size of a rating" has become embedded in many people's minds, to the point where they consider that 20 is twice as good as 10, without any consideration of the quality of the 20 against the quality of the 10.

Our continuous media studies for newspaper, magazine, radio and television show conclusively that the quality of the audience—and I want to emphasize this—and the compatibility of the audience with the advertiser's product—is far more important than the single dimension of size, which is reflected by a rating. Yet the broadcast rating, as it is most commonly used, places so much emphasis on size of audience.

The broadcast rating appeals to most of us in America who have educated and trained ourselves to oversimplification. We like alphabet abbreviations.

We like the business index—everything that gives us quick, in an abstract way, some information. We like pills and capsules to correct all our ills. But what we don't like to do is to figure something out for ourselves. We want everything quick.

The broadcast rating is a quick abstract guide, and it is very popular.

Obviously every station, network, artist, advertiser or agency wants to be the best, but size, as determined by a rating, is not always necessarily the best.

In striving for the highest broadcast rating with the biggest audience, the logical conclusion is to imitate the programs that have the highest rating.

But, imitation can only perpetuate "more of the same." And "more of the same" can only result in mediocrity.

That's the problem in using the rating as the criterion to measure broadcasting.

In the commercial world, where a successful product is imitated with an inferior product, it eventually falls by the wayside for lack of public buying acceptance. In the paid entertainment world, where a producer imitates a successful enterprise and starts a cycle, the late imitators fail because people get fed up on "more of the same" and stop paying at the box office for inferior imitation entertainment.

In the paid entertainment field, which we measure daily, the creator with an original idea always has the opportunity for financial payoff when he can stimulate public acceptance for something new and different which he has created. We are fearful—that the continued use of the present broadcast rating concept—with its emphasis on size of audience rather than quality of audience—might tend to stifle new ideas and creative talent in broadcasting.

While television and radio today provide free entertainment for the public, if the quality of television should decline because the rating concept dictates "more of the same"—the size of ratings themselves are also likely to decline. And I ask the question, in studying the ratings that have been reported today, isn't it a fact that the size of most of the ratings this past year have been smaller than they were several years ago?

Mr. Cox. You mean they are dividing up a smaller audience?

Mr. SINDLINGER. Right.

Let's us go to another related subject. We are probably the only research organization that has ever had the opportunity to interview, in depth, every household in the U.S. that has been exposed to some form of paid or subscription television.

In 1951, we interviewed every one of the 300 families in Chicago who participated in the 90-day Phonevision tests conducted by Zenith.

In 1953 and 1954 we interviewed every family in Palm Springs, Calif., where the Telemeter test was conducted by International Telemeter Corp. owned by Paramount.

During the past year, we have interviewed practically every household in Bartlesville, Okla., where the recent Tele-movie test was conducted.

As you know, the Tele-movie operation folded a few weeks ago.

We are on record with our clients that the Bartlesville operation could not possibly succeed as it was conducted.

Mr. Cox. This was based on interviewing in the area?

Mr. SINDLINGER. Yes, and in Bartlesville.

But the failure of the Bartlesville operation does not necessarily mean that the public will not pay to see television in their homes.

It's human nature to not want to pay for what you can get free—if what you get free is as good as or better than what you are asked to pay for.

From all our continuous studies of public behavior the market for paid television—when and if—will come about only through a collapse in the quality of free television.

As objective analysts, we are neutral in any controversy between free and paid TV.

We have brought up the subject only to raise a question.

In summary:

In a period with such a highly competitive economy—is it wise for so much emphasis to be placed on the one-dimension (size of audience) rating concept?

Should we not place more emphasis on the quality of numbers rather than their size?

Senator MONRONEY. Thank you very much, Mr. Sindlinger. Did I ask you if, in your experience in these interviews in trying to determine what the public would like to see, you feel that the over-concentration of power of three networks to dictate the television fare to virtually all of America has anything to do with what you so aptly describe as more of the same?

Mr. SINDLINGER. Let me answer that by telling you basically what in one way. Our experience in dealing with the public on an entertainment basis—and I want to point out that I am here today not because we produce ratings. We produce a qualitative aspect of ratings. We don't believe in ratings. The public knows exactly what it wants right after it has seen it. The public can't tell you in advance what they want, but they have a very, very strong—from our data—a very strong way of expressing themselves.

Now, I think I can answer your question by citing a series of incidents that are happening recently.

We will interview a thousand people throughout the United States today. We ask the people not only what they do on television, but what books they read, what magazines they read, what movies they see, what they bought yesterday, and a whole variety of things, and how much time they spent with television.

Up until about October of last year, we never found more than 4 to 5 percent of the population dividing up their television viewing time in the evening between periods. In other words, it was almost a spontaneous—a person would say, "I started watching television at 6 o'clock and watched it until 10:30."

In October of this year, we started to find the percentage gaining, and as of 2 weeks ago we are finding 25 percent of the people being away from a television set for a matter of a half an hour or an hour or two, with the set still running, while they are reading.

Senator MONRONEY. That means a slippage of 25 percent at some period in that time—the television owner is letting his set go, and reading or doing something else. Do you find many of them who turn the sound off and leave the picture on, so it doesn't disturb their reading, and they can glance up?

Mr. SINDLINGER. I don't have any real evidence on that.

Senator MONRONEY. Several of my friends do that—cut the sound off so it won't bother them when they read, and then glance up to see if there is something interesting on television.

Mr. SINDLINGER. We have conducted interviews for TV Guide, which was a rapid success. It has gone from practically nothing to over 6 million, and TV Guide's success is in helping the public discriminate in what not to watch.

Mr. COX. By publishing descriptive material in advance?

Mr. SINDLINGER. We find that is one of the reasons for the success of their publication. It helps the viewer become selective.

Senator MONRONEY. If there were more competition in the broadcasting business, if you had 10 people struggling for audience acceptance, would you not then have a greater degree of originality and less of this "more of the same," or would you just magnify this "more of the same" by the 10 instead of the 3?

Mr. SINDLINGER. I think it is a question of the availability of a magazine—you can pick up any magazine you want; you can pick up a newspaper any time you want to read it; you can do most things around the house when you want. With television you have to be confined at the time it is there, and if it is not there you can't participate. I think that answers the question.

Mr. COX. Would this represent the kind of more qualitiative use of this data you were talking about? We noted an item in Variety on April 23 of this year where it indicated that one of the top-rated shows of the past season, "Restless Gun," was not being renewed because apparently the advertiser, through some other means aside from its popularity, had determined it was not selling his product; whereas, on the other hand, the "Eddie Fisher and George Gobel Show," which had not had high ratings, was being renewed because it was felt the show was successfully achieving the end result, the sale of the sponsor's cigarettes?

Mr. SINDLINGER. Let me answer that by telling you basically what our business is. We start with a different concept in measuring the size. Our theory is to define the market for the products, whether it is toilet paper, cigarettes, soap, or whatever it might be. We define the market for the product, and then find out what these people that are in this market do. What magazines do they read? What newspapers do they read? What are their tastes? What are the things that they like to do? And then you find out what you have to do to make these people do what you want them to do through the right kind of commercials, the right kind of advertising. Then you jell that together and reach, through television or any other media, so far as that goes, to get at the quality of the market you are after rather than the size of the market. Based upon our data, I don't think you are going to find westerns high-rated next year. I think there is going to be a catastrophe on westerns next year, because movie theaters for years have lived on westerns—and today most westerns in movie theaters you can give away. It will be a survival of the fittest, and it will be something new next year, because a lot of these westerns can't keep up with the competition of the volume of entertainment that is coming through.

Mr. COX. Is it a logical inference from the statement you made on the last page of your prepared statement that, if we continue to get this emphasis on sameness, and the emphasis merely upon size, which produces that drive to reproduce the same sort of programing—if this continues to produce a reduction in television viewing, or at least in the size of the audience—this may eventually get to a point where this audience will not attract advertising support sufficient to maintain commercial advertising; and that in this way you would get to this point of subscription service, where the viewer is called upon directly to pay for the kind of programing he wants to see?

Mr. SINDLINGER. You said it better than I could. It is exactly what I meant, because if the size of the television audience diminishes, and

if we get into a further economy where quality becomes more important than size, and if a lot of people get hurt in television, and the quality of television then deteriorates, the public is going to demand something else. And I don't think we are going to have Government television in this country; we will probably have pay television.

Senator MONRONEY. Couldn't you maybe have——

Mr. SINDLINGER. You might have both.

Senator MONRONEY. Could you go to high-class films—if the networks bore you with their programing, will not the individual stations, and someone perhaps with a smart sense of timing and dramatics, be able to produce film shows that may supplant the network shows?

Mr. SINDLINGER. I think it can be said that the sale of the Hollywood movies to television in the last year has saved television, because almost 25 to 30 percent of the total viewing time this last winter was devoted to old movies, and most of it late at night. We measure more time spent in April and May and last summer—more time spent after 10 o'clock with television than spent prior to 10 o'clock in certain sections of the country and certain days of the week where better movies were on.

Senator MONRONEY. Where good movies, even though old, were replayed?

Mr. SINDLINGER. When a movie is free, it is new no matter how old it is.

Senator MONRONEY. There have been great movies, some advertised recently, truly great artistic productions that are being played back; and that could present a very serious threat to network programing, if the networks continue to meet the lowest common denominator.

Mr. SINDLINGER. I would like to do business with the networks.

Senator MONRONEY. These are the ones that feed the programs to the 43 million television families. You can hardly leave out the director of the whole show; you just can't do it. If the programing is bad, or insufficient, or fails to meet the public taste, simply because none of the three networks seeks to try the new, or to bring about any great innovations that tend to make television an art instead of a strictly mathematically computable business——

Mr. SINDLINGER. That is the point I am trying to make here. I think that the rating concept—I am sure everybody in this room today completely understands, and the people they communicate with completely understand, the laws of probability and all these things we talked about today. But the facts are that a great many decisions have been made on the size of audience, and you copy, and you copy, and you copy—and all copying can do is lead to mediocrity. It happened in the movies, it happens in everything in life.

Senator MONRONEY. Do you think a base of 1,050 electronically wired sets can properly predict what the people in America ought to hear or ought to see?

Mr. SINDLINGER. The reason I am not in the rating service, competing with my fellow competitors here and adding more to the mess, is the fact that we measure each day in various communities across the country things that can be checked out. In other words, we measure your movie attendance. You can count the tickets that are sold in a town. Our clients can tell us how many tickets were sold, or you have admission tax to tell you how many tickets were sold.

We measure the number of people in the community that read a magazine, you know how many copies of the magazine were obtained by circulation, and you can get circulation records as to how many people in the community do get the magazine.

From a practical matter, we found that you can't measure—I am not talking about the textbook, I am talking from experience—that you can't measure accurately in a community anything such as readership of newspapers, an 80-percent activity, or a 40-percent activity, or magazines which can get down to 5- and 10-percent activity, without a sample size in that community of at least 1,800 to 3,000.

We use 7,000 to 8,000 interviews a week. I don't see how you can possibly, from our own experience—not from a technical standpoint, but from practical experience—I don't see how you can possibly measure quarter hour periods with a sample in a community of 200.

Senator MONRONEY. You would not say, as we heard today, that people are like grains of wheat, or tons of coal, or carloads of milk?

Mr. SINDLINGER. That is correct. If you want to make a survey among men married to blonds to find out whether they prefer blonds, you need a very small sample, but that is a very unique type. I don't think you can heard people together; I don't think they are homogeneous.

Mr. COX. You refer to yours as depth interviews. What is its average length?

Mr. SINDLINGER. The shortest is 7 minutes, the longer from 35 to 40 minutes. The in-person interviews run from an hour to an hour and a half. Our economic studies that we are conducting now, where we are measuring unemployment, purchases of products, buying plans for automobiles, refrigerators, and so forth, attitudes toward business, politicians, what people are talking about, and so forth—those studies run about 38 minutes on the telephone—we hold these people on the telephone for as high as 38 minutes.

If anyone challenges whether we can do it, give me your home telephone number, and I will have our Washington interviewer call you, and we will complete the interview.

Senator MONRONEY. Thank you very much for your statement, Mr. Sindlinger. We appreciate your being here.

(At this point testimony was heard from George R. Town, executive director of the Television Allocations Study Organization. Since his testimony concerned, allocations matters, it has heretofore been published in pt. 6 of the "Record of the Television Inquiry.")

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Senator MONRONEY. The committee will stand in recess, subject to call of the chairman.

(At 6:35 p.m., the committee was recessed, subject to call of the Chair.)

APPENDIX

The following are materials furnished by witnesses at the committee's request or received from others subsequent to the conclusion of the hearings on June 26, 1958. The materials include:

1. Materials furnished by Trendex, Inc., including distribution of that company's sample by cities, instructions to telephone interviewers, questions asked in a typical interview, guide for supervisors, etc.

2. Materials furnished by the Pulse, Inc., including sample questionnaires, instructions to interviewers, special studies of viewers' opinions of programing, etc.

Letter dated June 18, 1958, from Stuart T. Martin, president of WCAX–TV of Burlington, Vt., urging the development of standards for audience measurement by the Federal Government.

4. Letter dated July 13, 1958, from Mrs. Dorothy C. Burgess, commenting on the present state of television programing and proposing improvements.

5. Letter dated July 20, 1958, from Wilton C. Haff describing a new electromechanical device for producing measurement data without probability extensions.

(These materials are as follows:)

1. Materials Furnished by Trendex, Inc., Including Distribution of That Company's Sample by Cities, Instructions to Telephone Interviewers, Questions Asked in a Typical Interview, Guide for Supervisors, etc.

Distribution of the Trendex sample by cities, each half hour, evenings

	Calls		Calls
New York	192	Houston	32
Chicago	128	Cincinnati	32
Detroit	96	Washington	32
Philadelphia	64	Kansas City	32
Boston	64	Indianapolis	32
Cleveland	32	Columbus	32
St. Louis	32	Atlanta	32
Dallas-Fort Worth	32	Denver	32
Baltimore	32	Omaha-Council Bluffs	32
Minneapolis-St. Paul	32	Nashville	32

Distribution of the Trendex sample when weighted according to number of TV homes

	Percent		Percent
New York	24.7	Houston	3.3
Chicago	15.3	Cincinnati	2.6
Detroit	8.4	Washington	2.4
Philadelphia	6.0	Kansas City	2.0
Boston	5.4	Indianapolis	2.0
Cleveland	4.8	Columbus	2.0
St. Louis	4.7	Atlanta	1.5
Dallas-Fort Worth	3.8	Denver	1.5
Baltimore	3.8	Omaha-Council Bluffs	1.2
Minneapolis-St. Paul	3.6	Nashville	1.0

Actual distribution of the Trendex sample, Feb. 5, 1958, 10 to 10:30 p.m.

City	Calls	Don't answer	Line busy	Watching		NBC	CBS	ABC	Other	Don't know	Own TV	
				Yes	No						Yes	No
New York	29	3	1	15	6	5	3	2	5	------	21	4
	32	4	3	12	12	5	3	1	3	------	24	1
	28	2	1	16	7	6	3	1	6	------	23	2
	31	1	1	14	12	5	6	1	1	1	26	3
	30	3	1	9	16	7	------	2	------	------	25	1
	31	1	1	16	13	5	5	2	4	------	29	------
Chicago	31	2	5	18	5	8	4	4	2	------	23	1
	31	2	6	18	3	9	4	1	4	------	21	2
	30	5	2	19	4	9	5	4	1	------	23	------
	31	4	5	14	4	9	2	1	2	------	18	4
Detroit	31	2	------	20	9	8	4	1	7	------	29	------
	28	8	2	8	8	5	3	------	------	------	16	2
	31	6	4	16	5	7	2	2	5	------	21	------
Philadelphia	32	7	4	17	4	12	4	1	------	------	21	------
	32	10	3	11	7	6	3	1	1	------	18	1
Boston	30	10	1	13	6	5	4	4	------	------	19	------
	30	7	4	10	5	3	6	1	------	------	15	4
Cleveland	26	2	3	21	------	11	5	4	------	1	21	------
St. Louis	30	5	2	17	5	6	4	7	------	------	22	1
Dallas-Fort Worth	32	4	1	14	12	7	2	3	2	------	26	1
Baltimore	32	6	4	14	8	8	3	3	------	------	22	------
Minneapolis-St. Paul	32	2	4	20	6	11	2	2	3	2	26	------
Houston	30	5	3	12	6	9	2	1	------	------	18	4
Cincinnati	31	4	2	16	9	9	2	5	------	------	25	------
Washington	31	6	3	15	6	8	2	3	2	------	21	1
Kansas City	31	3	6	17	5	5	9	3	------	------	22	------
Indianapolis	31	6	5	13	7	6	2	3	1	1	20	------
Columbus	30	7	2	15	6	5	5	5	------	------	21	------
Atlanta	29	9	2	14	4	8	4	2	------	------	18	------
Denver	31	7	2	15	5	7	2	6	------	------	20	2
Omaha-Council Bluffs	31	5	2	17	5	7	6	4	------	------	22	2
Nashville	30	11	2	11	6	5	3	3	------	------	17	------

These are your instructions while working on Trendex Radio Surveys. Please read them carefully, and if there is anything which you do not understand, please consult your local supervisor or this office.

Remember that you are acting in the capacity of a reporter and, therefore, it is your duty to record only what you hear over the phone, whether it be correct or in error.

Also, in this capacity, you are working for all of the major networks in the broadcasting industry, and for this reason we do not want your names known to them, nor do they wish to know you as an individual. The reason for this being that radio and television is a competitive industry, and also the fact that what you find in a particular hour in a particular city, may not be indicative of the rest of the country at that time. We, therefore, request that you do not discuss your findings on these interviewing sheets with outsiders.

Radio Reporters Instructions

1. Use one interviewing sheet for each half hour period.

2. List in advance of the interviewing period (in columns provided on the extreme left side of the interviewing sheets) 32 telephone numbers. Only copy residential numbers, and do not copy from the telephone book any numbers which would indicate that the subscriber might be a doctor or a registered nurse. Be sure to keep in the column and on the pages assigned to you. When you have completely gone through the section of the telephone book assigned to you, go back and start all over again.

3. Fill in the blanks at the top of each sheet with all of the information requested before you begin interviewing. Be certain that you mark either a.m. or p.m. after the time period.

4. Your interviewing is to begin exactly 2 minutes after the time called for on your interviewing schedule. Never work the first 2 minutes of any interviewing period. For example:

The top half of your first sheet might be for 8:02 a.m. to 8:15 a.m. The bottom half of your first sheet might be for 8:17 to 8:30 a.m.

The top half of your second sheet might be for 8:32 a.m. to 8:45 a.m.

The bottom half of your second sheet might be for 8:47 a.m. to 9 a.m.

The top half of your third sheet might be for 9:02 to 9:15 a.m., etc.

5. Set your clock by your own radio before you begin your interviewing.

6. Place the guide card near you so that you may see the questions clearly before you. Ask the questions exactly as they appear on the guide card. You are not to rephrase them or change them. You are not to add anything such as hello, good evening, etc. These questions have been so worded to give us the information we want with the least amount of conversation.

7. Dial, or give the operator the first number on your interviewing sheet. When someone answers, ask the questions on your guide card exactly as outlined, and write down exactly what the respondent says. At no time do you ever change the information given you by the respondent. Sometimes when you know that the information given you is wrong, there is a strong temptation to alter it and put the correct information down. We are not interested in what you know, but in what the person at the other end of the phone knows, or does not know. Therefore, you record exactly what you are told by the respondent and nothing else.

8. Ask question 1 of everyone who answers the telephone. This means all adults, and children whom you judge to be capable of giving you an intelligent answer.

(*a*) If a child should answer the phone and you think he or she is too young, say, "Please call your mother or father to the telephone." When the adult answers, proceed with the normal interview.

(*b*) If the child refuses to call his mother or father to the phone, check the Ref column and go on to the next number.

(*c*) If the telephone number is reported as a disconnect, place a checkmark in the disc column and go on to the next number.

(*d*) We wait six rings before we mark a checkmark in the DA (don't answer) column. If the line is busy, you place a checkmark in the LB (line busy) column. If in answer to question 1, you are denied all information, then you would place checkmark in the "Ref." column. This "Ref." stands for refusal and means not only someone, possibly annoyed by your call, but those people who respond "I don't speak English" or "I am deaf," etc.

(*e*) If the telephone operator says, "That number has been changed to——" draw a line through the number you were calling, write in the number given you by the operator and if it is still your calling area, call the number. If the number has been changed to a toll call, mark the number a disconnect.

9. If a respondent answers some of your questions, but refuses to answer all of them record the information which you do receive in the usual manner, and place an X in each of the remaining spaces. This shows us that you asked the questions, but could not get an answer.

Do not mark the "Refused" column for refusals developing during the interview. The "Ref." column is to be checked only when you are denied all information and you learn nothing about the person except that he or she answered the phone.

10. Never dial the next number on your interviewing sheet until you recorded completely all of the information given in the previous interview. The number of calls you make are not as important as accuracy.

11. At the end of 13 minutes there may be telephone numbers which you were unable to call. Copy these on another interviewing sheet for another day so you will not waste the numbers already copied.

12. You work down your interviewing sheet, one call at a time. When a number does not answer or the line is busy, you continue down the interviewing sheet. Should you have time left over at the end of the 13 minutes you just wait, you never, under no circumstances do you ever call back a don't answer if a line is busy.

13. Please do not use ditto marks, and be sure to record only what the respondent tells you. We are just as interested in the misinformation as in the incorrect information, or in the fact that a person does not know what he is listening to.

REGARDING QUESTION 1

If the respondent answers "Yes" please place a checkmark in the "Yes" column of question 1 and ask questions 2, 3, and 4.

If the respondent says "I am watching television," this is still a "No" answer to your question which is, "Was anyone in your home listening to the radio just now?" Therefore you would place a checkmark in the "No" column of question 1 and end the interview with "Thank you, good bye."

If questioned as to who you are or why you want the information, say "I am a reporter in the employ of Trendex, Inc., New York City, making a survey of radio audiences, is anyone in your home listening to the radio just now?"

(When giving the information above, do not under any circumstances, release your own name, address, or telephone number.)

If questioned still further by anyone who wants your name, say "I am sorry but that is all the information which I can give you." Then place a checkmark in the "Ref." column and say "Thank you; goodbye," and go on to the next number.

Sometimes in answer to question 1 a respondent will say that he is listening, but as you ask for the program and station, you will discover that he turned the radio off a few minutes before you called. Do not erase, just draw a line through the "Yes" check and the information which he gave you, and place a checkmark in the "No" column, and end the interview with "Thank you; goodbye."

REGARDING QUESTION 2

Write down the name of the program as given, or DK if the respondent replies that he does not know. Always write the DK when the respondent does not know for that lets us know that you asked the question.

Often when you ask what program, people will reply with the name of the station. When this occurs, record the station in the station column (col. 3) and repeat "What program, please?"

Should the reply to question 2 be that there are 2 radios going, please ask "What program and station is on each?" Then record one set of information in the column 2 and 3, and the other set in the space provided for question 4.

REGARDING QUESTION 3

If a respondent reports that he or she does not know the station, you should record DK in the space provided for question 3. If he replies 1180 on the dial then you would record 1180 in the station column. Again you write down whatever you are told.

If a respondent reports listening to an FM station, record FM in the station column along with the dial reading or station that he gives you.

When a respondent reports that he or she will "go to the radio to look for the dial number" and then forgets to return, it is not necessary for you to wait for more than 1 minute. If he has not returned by the end of the minute, record a black "X" in the station column.

REGARDING QUESTION 4

If, in answer to question 4, a respondent says "No" then write the world "No" in the space provided for question 4 and end interview with "Thank you, goodby."

If a respondent says "Yes" and ask "What program and station please?" This information will be recorded in the space provided for question 4, therefore, you will have to write fairly small in order to get it all in.

NICKELING

Some of you asked how we know that you are working when we are so far away. We are often asked that same question by the people for whom we do the surveying. They ask us to prove to them that you are making the calls. So a system has been devised called nickeling, which name comes from the fact that in most localities it costs a nickel to make a phone call. This nickeling is done either by a local supervisor or someone from the New York office. She will keep dialing your telephone, which will be busy, and then "break through" to you. This break will usually come while you are resting for the 2 minutes. The supervisor will then ask you for the telephone numbers of the last two respondents with whom you spoke, and whether they told you they were listening or not listening. She will then call and verify this information with the respondent. When a supervisor calls you, give her the last two numbers with whom you spoke, never give her a "don't answer" or "line's busy."

This then, is how we prove you are working. It is a natural business precaution, and something which can and will be done at any time. It is very easy to watch people at work in any office, to help them with their problems,

etc., because they are so near you. It is a little more difficult when people are spread all over the country and working from their own homes.

Another thing to remember about nickeling is that many changes take place in the radio and TV industry because of your work. Programs change, stars are hired and fired, and some of that is because of the work you do. For this reason before a sponsor is going to invest $10,000 or $20,000 in a show he wants to make certain that the work is honest as it can possibly be and so he will say to us, prove it—and we do.

SUBSTITUTIONS

From time to time it may not be possible for you to do your work. When this happens please notify your supervisor, or the New York office immediately. Naturally we know that you will cover your work, but should there be an emergency, please let us know.

GENERAL COMMENTS

Enclose a copy of the radio log from your local newspaper with each assignment. If you should have two time periods to cover in one day, enclose a newspaper log with the later assignment.

Always be courteous. If you strive to sound as businesslike as possible, you will find that most people will answer your questions, almost as automatically as you ask them. This businesslike aproach will also save you time that might otherwise be spent in trying to convince them that you are not some relative or friend playing a joke on them.

Always ask the questions exactly as they appear on the guide card. Do not rephrase them. We want them asked only as they are, for they will give us the information which we need.

Put down whatever the respondent tells you. Never change or alter any information even if you know that what you are being told is incorrect. We want to know what the respondent knows, not what you know. In short, we want an honest report of what happens during a certain time. We are not looking for anything in particular—we do not necessarily want or expect to find everyone listening to the radio—we merely want to know what is going on in a home when we call.

Be sure to total your work. We need the totals for the total calls, total answers, lines busy, yes and no to question 1. Disconnects are not part of your total calls.

MAILING

Please be certain to mail your interviewing each day after it has been completed. If you give it to someone to mail, please make certain that it is a responsible individual who will mail it properly.

TELEVISION GUIDE CARD

1. This is a nationwide survey. Is anyone in your home watching television just now?

(*a*) If "No" place a checkmark in the "N" column of question 1 and ask question 5.

(*b*) If "Yes" place a checkmark in the "Y" column of question 1 and the "Y" column of question 5. Ask question 2.

2. What program, please?

(*a*) Record information in space provided for question 2. Ask question 3.

3. What station, please?

(*a*) Record information in space provided for question 3.

4. Ask only if assigned:

In your home, how many men, how many women, how many children are watching that program?

(*a*) If the answer is, "My son and I" ask (*b*).

(*b*) Is your son over or under 18?

5. Do you have a television set?

(*a*) Checkmark the correct column of question 5.

If the respondent should ask "Who are you?" do not release your name, address, or telephone number. Say, "I am making a survey of television audiences for Trendex, Inc., of New York City," and then repeat the question you were asking.

Close every interview with "Thank you; goodby."

PAGE 1

These are your instructions while working on Trendex television surveys. Please read them carefully, and if there is anything which you do not understand, please consult your local supervisor, or this office.

Remember that you are acting in the capacity of a reporter, and therefore it is your duty to record only what you hear over the phone, whether it be correct or in error.

Also in this capacity, you are working for all of the major networks in the broadcasting industry, and for this reason, we do not want your names known to them nor do they wish to know you as an individual. The reason for this being, that radio and television is a competitive industry, and also the fact that what you find in a particular hour in a particular city may not be indicative of the rest of the country at that time. We, therefore, request that you do not discuss your findings on these interviewing sheets with outsiders.

PAGE 2

1. Use one section of one interviewing sheet for each 15-minute period.

2. List 16 telephone numbers in advance of the interviewing period in the column provided on the extreme left-hand side of the interviewing sheet. Only copy residential numbers, and do not copy from the telephone book any numbers which would indicate that the subscriber migth be a doctor or a registered nurse. Be sure to keep in the column and on the pages assigned to you. When you have completed the section of the telephone book assigned to you, go back and start all over again.

The following is the section and column assigned to you:

	Pages only	*Column*
Sec. 1		
Sec. 2		
Sec. 3		
Sec. 4		

3. Fill in the blanks at the top of each sheet with all of the information requested. This is to be done before you begin interviewing. Also be certain to write either a.m. or p.m. after the time period.

4. Your interviewing is to begin exactly 2 minutes after the time called for on your interviewing schedule. Never work the first 2 minutes of any 15-minute period. For example, your first sheet might be 8:02 to 8:15 a.m., the second 8:17 to 8:30 a.m., the third 8:32 to 8:45 a.m., and the fourth 8:47 to 9:00 a.m., etc.

5. Set your clock by your own radio or TV set before you begin interviewing.

6. Place the question guide card near you, so that you may see the questions clearly. Ask the questions exactly as they appear on the question guide card. You are not to rephrase or change them * * * you are not to add anything such as "hello," "good evening," etc. These questions have been worded to give us the the information we want with the least amount of conversation.

Also have near you the television log from your local paper. You may need it if you are requested to wire results.

7. Dial, or give the operator the first number on your interviewing sheet. When someone answers, ask the questions from your question guide exactly as outlined and write down exactly what each respondent says. At no time do you ever change the information given you by the respondent. Sometimes when you know that the information given you is wrong, there is a strong temptation to alter it, and put the correct information on the interviewing sheet. We are not interested in what you know, but in what the respondent does or does not know.

PAGE 3

Therefore, you record exactly what you are told by the respondent and nothing else.

8. Ask question 1 of everyone who answers the telephone. This means all adults and children whom you judge to be capable of giving you an intelligent answer.

a. If a child should answer the phone and you think that he is too young, say, "Please call your mother or father to the telephone" and when the adult answers, proceed with the interview.

b. If the child refuses to call his mother or father to the telephone, check the "Ref" column and go on to the next number. If no adult is at home, place a checkmark in the "don't answer" column.

c. If the telephone number is reported as a disconnect, or a temporarily changed number, place a checkmark in the "Disc" column and go on to the next number.

d. We wait six rings before we mark a checkmark in the "don't answer" column. If the line is busy, place a checkmark in the "LB" column for "line busy." If in answer to the first question, you are denied all information, then you would place a checkmark in the "Ref" column before going on to the next number.

e. If the respondent cannot understand English, or is deaf, repeat your first question three times. If you fail to get an answer, place a checkmark in the "Ref" column. The "Ref" column is used when you are denied all information, and you have learned nothing except that some one answered the telephone.

f. Answering services: Should you reach an answering service, this number is to be recorded as a "don't answer."

g. Apartment switchboards and apartment hotels: These are to be recorded as "Disconnects."

The difference is that you are actually reaching the number of a person who is not at home (a DA) when you get their answering service. In reaching a switchboard of a hotel or apartment, the voice will request the name of the party you are calling. This you do not know and therefore the number is thrown out of the sample by marking it a "Disconnect."

In both cases, your comment is "I am sorry, I've reached a wrong number."

9. If a respondent answers some of your questions, but refuses to answer all of them, record the information given in the usual manner, and place an X (for "Refused") in each of the remaining spaces.

PAGE 4

Do not mark the "Refused" column for refusals developing during the interview. The "Ref" column is to be checked only when you are denied all information and you learn nothing about the respondent, except that he or she answered the telephone.

10. Never dial the next number on your interviewing sheet until you have completely written down all of the information given you in the previous call. Numbers of calls are not as important as accuracy.

11. At the end of an interviewing period, there may be telephone numbers that you are unable to call in the 13 minutes time. Copy these on another interviewing sheet for another day, so that you will not waste numbers already copied.

12. You work down your interviewing sheet, one call at a time. When a numbed does not answer, or the line is busy, you continue down your interviewing sheet. Never go back and call lines busy or don't answers, even if you have time left in your 13-minute interviewing period.

13. Please use lead pencil in this work. Also, please do not use ditto marks, and be sure to write down only what the respondent says. We are just as interested in misinformation as in correct information, or in the fact that someone "does not know."

Regarding question 1

If the respondent answers "yes" place a checkmark in the "yes" column of question 1 and also question 5, then proceed to ask the other questions 2, 3, and 4.

If the answer to question 1 is "no" place a checkmark in the "no" column of question 1 and ask question 5.

If questioned as to who you are, or why you are making the survey, say: "I am making a survey of television audiences for Trendex, Inc., of New York City," and repeat the question you had asked. When giving this information you never, under any circumstances release your own name, address, or telephone number.

If questioned still further by anyone who wants to know who you are say, "I am sorry but that is all the information which I can give you" and treat the call as a refusal.

Sometimes in answer to question 1, a respondent will say "yes" but as the interview progresses, you will discover that she was really listening 5 or 10 minutes ago. When this happens, do not erase, but draw a line through the checkmark in column 1's "yes" and place a checkmark in the "no" column of question 1.

Regarding question 2

Write down the name of the program exactly as it is given you by the respondent.

PAGE 5

If the respondent says that he does not know the name of the program, then record "DK" which stands for "Don't know." In this way, we know that the question was asked, and the person did not know.

Often when you ask "What program?" people will say channel 11. When this occurs, please place this information in the "Station" column and repeat "What program, please?"

From time to time, people will tell you that there are two television sets on at the same time. When this occurs, please ask "What program and what station is on each, please?" Record this information in the space for that call, the programs one above the other in the program column, and the stations one above the other in the station column.

Should a respondent tell you that they are watching a program, which you know is no longer being telecast, but which went off the air 5 or 10 minutes before you may have placed the call, you still record the information just as it has been given you, but place an X alongside of the program information.

Regarding question 3

If a respondent reports that he or she does not know the channel which they are watching, record DK for "Don't know" in the space provided for column 3.

You will find, from time to time, as more TV stations are opened, that people may give you a station or the call letters for one that you have never heard of, or that may not be listed in your television news log. When this occurs, record the station exactly as it has been given you, even though you may think that it is incorrect. This may happen particularly in those areas known as "fringe areas." This means that although they are served by certain TV stations within their own city, they live close enough to watch a station in a nearby city.

Waiting for a respondent.—When a respondent reports that he or she will "go to the TV set" to discover the channel, and then forgets to return it is not necessary for you to wait for more than 1 minute. If the respondent has not returned at the end of a minute, record an X in the station column to indicate a refusal.

Wrong station information.—When a respondent reports that he is watching a particular program, for example, the "Ed Sullivan Show" and then gives you as the channel being watched the NBC station, place a small "x" next to the station in the station column. You place this small "x" only when you can positively identify the program and station from your newspaper log. You would never put an "x" in the station column if someone gave you a program such as "a man singing" or "a comedy program," or anything else which is vague. However, as always you would never change the information given you by the respondent. You would record it, but place an "x" for your own information.

PAGE 6

Regarding question 4

Audience composition.—If a respondent should ask you what we consider a child, the answer is 18 years of age. Anyone younger should be classified as a child, and anyone older is considered an adult.

If the answer is something like "My son and I," please ask: "Is your son over or under 18?" so that you can tell if the "1" should go in the M column or the C column. If only one woman is watching, you would put a "1" in the W column and an "0" in the M and C columns. You may, from time to time, reach a respondent who says something like "Actually no one is watching the program." In this case, you would record an "0" in each of the columns, M, W, and C.

Regarding question 5

This question is asked of only those respondents who say "No" to question 1. However, you must record a checkmark in the "Y" column of question 5 for all those people who are watching television. While you do not ask the question of those who said "Yes" you must checkmark it.

If a respondent reports that they have a television set but that it is broken, you would write the letter "B" for broken in the "N" column of question 5.

If a respondent refuses to tell you if he has a television set, record an "x" in the "N" column of question 5.

Nickelling

Some of you have either asked your supervisor or us here in the office how we know that you are working when we are so far away. We are often asked that very same question by the people for whom we do the surveying. They ask us to prove it. So a system has been devised called nickelling, which comes from the fact that in most localities it used to cost a nickel to make a phone call. This nickelling is done either by your local or district supervisor whenever she comes to town, and you may be working. She will keep dialing your number which will be busy, and then "break through to you" when you are on your 2 minutes off, or sometimes between the time you have finished calling and are about to dial again. The supervisor will then ask you for the last two numbers with which you spoke, and whether those respondents reported listening or looking, or not listening or not looking. She will then call and verify this information with the respondents. When a supervisor calls you, give her the last two numbers with whom you spoke, never give her a don't answer, line's busy, or refusals.

PAGE 7

This then, is how we prove that you were working. It is a natural business precaution, and something which can and will be done at any time. It is very easy to watch people at work in an office, to help them with their problems because they are always near you all day long. It is a little more difficult when people are all over the country and working from their own homes.

The other thing to remember about nickelling is that many changes take place in the television field because of the work you do. Programs change, stars come and go, and some of that is because of the work you do. For this reason, before a sponsor is going to invest $10,000 or $25,000 or fire some performer, he wants to be certain that the work is as honest and fine as it can possibly be, and so he will say to us, "Prove it."

Substitutions

From time to time, it may not be possible for you to do your work. When this happens, please notify your supervisor or this office immediately, so that we can arrange a substitution for you. Please give both she and the substitute as much time as she can. There are, however, and always will be emergencies, in which case the only thing you can do is call her, no matter how late it is. Please make certain, however, that you do call her as we cannot put the TV program back on the air.

Whenever you have a substitute, she must write her name on the interviewing sheet. It does not come in under your name. This is most important. Also, you may never use as a substitute any person who has not been trained by either a local or district supervisor.

To sum up

1. Prepare your sheets in advance of any work you do, and always have at least 8 sheets of numbers on hand.

2. Ask the questions exactly as they appear on the guide card.

3. Put down whatever the respondent tells you in his words. If she reports watching WNBT, record WNBT; if she says channel 4, record "Ch. 4." Do not alter or change any information no matter how peculiar it may seem to you. We want to know what the respondent knows, not what you know. In short, we want an honest report. We are not looking for anything in particular. We do not necessarily want to find people watching TV. We merely want to know what goes on in a home when you call.

4. Be certain to total your work. We need the totals which are indicated on the sample interviewing sheet—no others. Disconnects are not part of your total calls.

5. Mail your work promptly with a copy of the TV log from your daily newspaper. If you have two assignments, send in the log with the later assignment.

6. Be certain that the top half begins with either the hour or half hour. One sheet would have on it: 8:02 to 8:15 and 8:17 to 8:30, or it might be 8:32 to 8:45 and 8:47 to 9. Never combine such things on one double sheet such as 7:17 to 7:30 and 7:32 to 7:45. If you had an assignment such as 7:15 to 9 p.m., your first sheet would be 7:17 to 7:30 (a double interviewing sheet with your one 15-minute period on it). You would then start a second double sheet with 7:32 to 7:45, 7:47 to 8, etc.

TRENDEX, INC.

CITY: Manhattan TIME 8 02 TO 8 15 pm DATE 8-5-57 NAME Jones

Disc	Phone No.	DA	IB	Ref	1. Y	1. N	2. PROGRAM	3. STATION	4. M	4. W	4. C	5. Y	5. N
✓													
		✓											
			✓										
				✓									
						✓						✓	
					✓		Ed Sullivan	Ch 2	0	1	1	✓	
					✓		Ike	Ch 5	1	0	0	✓	
	A				✓		a Movie	Nek TV	1	1	0	✓	
						✓							B
	B				✓		X	X	X	X	X	✓	
	C				✓		Ed Sullivan	Ch 4 X (2)	1	0	0	✓	
						✓							X
		✓											
	D				✓		Art Linkletter X	Ch -	1	1	0	✓	
✓													
					✓		Steve Allen	Nek TV (4)	1	1	1	✓	
TOTALS 14		2	1	1	7	3						8	2

CITY: Manhattan TIME 8 17 TO 8 30 pm DATE 8-5-57 NAME Jones

Dis.	Phone No.	DA	IB	Ref	1. Y	1. N	2. PROGRAM	3. STATION	4. M	4. W	4. C	5. Y	5. N.
		✓											
				✓									
	A				✓		Some Show Nek	Nek TV	0	0	0	✓	
					✓		The Mercury Proj	Ch 2	1	1	0	✓	
✓													
			✓										
					✗	✓	Ike					✓	
						✓							✓
	C				✓		Ed Sullivan Movie	Ch 2 CT V2	1	0	0	✓	
						✓						✓	
					✓		Million Dollar Movie	Ch 9	10	12	82	✓	
					✓		Steve Allen	Ch 4	X	1	X	✓	
		✓											
					✓		a Movie	Ch 11	1	1	1	✓	
	E					✓							B
	F					✓							X
TOTALS 15		2	1	1	6	5						8	3

EXPLANATIONS FOR SAMPLE SHEET

A. You naturally cannot identify the program "A movie" or "Some show" and therefore the station mention remains a DK–TV.

B. A refusal which develops after the respondent answers question 1 is indicated by an "X" in all the remaining columns. Under column 5, however, the respondent does get credit for owning a television set and you place a checkmark in the Y column of column 5.

C. Ed Sullivan, you can tell from your TV log, is broadcast over channel 2 and would therefore be credited to channel 2, although you leave the respondent's answer as it was given.

This respondent has two television sets and reports that they are both on. You then ask: What program and channel is on each, please? You record both on your interviewing sheet. However, you place one checkmark in the Y column question 5.

D. Art Linkletter has already gone off the air so an "X" is placed next to the program mention to indicate this.

E. If respondent reports he is not watching television because his set is "broken", a B for broken goes in the N column of question 5.

F. If respondent says "No" to question 1 and then refuses to answer question 5, an X for refusal is placed in the N column of question 5.

GUIDE FOR SUPERVISORS

In order to make things a little easier for the supervisors, you will find below the answers to some of the questions most frequently asked.

Trendex supervisors in each city are responsible for all of the interviewing and for the hiring and training of a staff. It is your duty to see that all of the work is covered. The interviewers are responsible to you, and you, in turn, to the field staff department in New York.

Your general duties include—

1. Assignment of specials which may be sent to you by wire.

2. Nickelling each reporter on your staff while she is working at sometime every month.

3. Visiting every member of your staff at least twice a year to hear them interview, go over new instructions with them and to make certain they know what they are doing.

4. Provide the New York office with information regarding programing and baseball information.

5. To keep the staff in good order.

6. To provide us with any pertinent information you feel we should know, i.e. another survey going on, stations changing their channel numbers, new stations on the air, reporters' problems, etc.

This means you may, from time to time, have to rearrange schedules to get the work covered or hire additional substitutes when necessary (particularly with the advent of Q.R.I.). Every reporter, incidentally, hired for Q.R.I. must be able to do Trendex interviewing.

HIRING

New reporters can be obtained in several ways. You can either insert a blind ad in your local paper, use names you obtain from other reporters or from the office, etc. While there are not many rules for choosing interviewers, certain things must be kept in mind:

1. Hire someone who is available at all times—do not hire reporters who for example, only can work days or evenings. This will become a headache to you and to us.

2. Do not hire reporters with very young children, for this will tend to keep them tied down at certain hours of the day, and you will often find them unavailable because of home responsibilities.

3. Do not hire interviewers who are deaf, even though, with an amplifier attached to their phone they may have better hearing than you or I.

4. Hire only females. As far as age is concerned, that will be left up to you. Only when you see and talk with a person who is say, over 60, can you judge whether they will be able to do the work.

5. No one is to be hired who is, in any way, connected with the television or radio industry; that is, who may have a son, husband, nephew, etc., working in one of the local stations. There may be no exceptions to this rule. The easiest way to determine this factor is to ask as expectantly as you can, "Do you know anyone in radio or television?" This will usually make the person being interviewed search their mind for possible connections. Naturally, if a woman tells you she once went to school with an announcer or something fairly farfetched, ask if she still sees him socially, etc., and make your own decision as to whether the connection is too "close for comfort."

Also wise at this point, and another method of obtaining the information, is to inquire as to just what occupation the husband is in.

6. If you hire people with past telephone survey experience, this information should be filed with the office so that it may be checked immediately with the last employer. This applies to Conlon, Crossley, C. E. Hooper, O'Connor Surveys, American Research Bureau, or Daniel Starch & Co.

7. No one may be hired who is presently employed by C. E. Hooper, Inc., or the American Research Bureau. Our schedules and theirs usually overlap.

If you do not know an applicant at all, it has been our experience that the best approach is to try and talk with them first by telephone in order to obtain

an idea of the speech and manner of the prospective reporter. Naturally, anyone with a decided speech affliction or accent is not acceptable. The following are the things which you should try and establish before you make an appointment for training. Spend a long time getting this information as it may save you a trip.

1. Why the reporter wants to work. (Women who are merely looking for something to keep them busy are very apt to resign the minute you do keep them busy.) Explain that much of the work comes in at the last minute.

2. Does she have radio or television connections. This can be readily determined by inquiring, "Do you know anyone in radio or TV?" This must be done as we are employed by the television and radio industries to make these surveys and, naturally, they must be as honest and impartial as is possible.

3. What are her home responsibilities? For example, would it be necessary for her to pick up children from school at 3 every day, or is her dinner hour flexible enough so that, if necessary she could work through it.

4. Does she have a private phone. Reporters with party lines must not be hired.

5. Make sure that she has discussed the idea of interviewing with her husband and that he approves of her decision to work.

6. Is she available daytime, evenings, Sundays, Sunday afternoons. Does she have, for example, commitments to the PTA, church societies, fraternal organizations, bowling leagues, etc., which would mean she could not work, say every Thursday after 5 p. m., or no Saturday mornings, etc.

7. Find out, in the case of an older woman, if she is responsible for the care of her grandchildren.

8. Get to know the state of her health. I want no pregnant women, no heart cases, women with cataracts, etc. Physically handicapped people usually make excellent interviewers unless it is a case of their having some creeping disease such as multiple sclerosis or rheumatoid arthritis.

If you hire anyone with the latter diseases you will only be letting yourself in for much grief when it comes to the time that they feel they can continue to work, and yet their handwriting is illegible to us.

If you are speaking with someone who is handicapped, ask them the nature of it—can they write? can they dial a phone? etc.

As mentioned above, the longer you discuss these points the better off you are. There is nothing more frustrating than spending an hour journeying to somebody's home, only to get there and discover they are unacceptable.

9. Discuss her educational background, but in the sense that a person with a Ph. D. or other degrees will find the work boring and not enough of a challenge to them.

10. Discuss thoroughly over the phone the pay rate and the tax situation.

11. If a woman feels the pay rate is too low, but "will take the job," don't bother—she'll quit at the first opportunity.

The same way, do not hire anyone who is doing you a favor by taking the job, or because you feel that if you don't get her you might not be able to get the work assigned covered. It just doesn't work, and you'll discover by experience that hunches and first impressions about people are usually correct.

Although it may sound strange to you, particularly if you receive some fantastic job like hire and train six reporters in 2 days, never but never hire anyone you have the slightest doubts about. It just never works—and, unfortunately, that statement was learned the hard way. Also, do not promise her a job in talking with her. Explain that you will come out, go over the work, have her do practice and then let her know if she is hired.

TRAINING

If, after your conversation with the prospective reporter, you feel that she is the type that we want, make an appointment to see her in her home for training. Explain to her that she will be paid for the practice work she does.

Before you go to the interviewer's home, please prepare 10 interviewing sheets with numbers copied on them. When you see her, make certain that she has a comfortable place in which to work, and that it is not in the center of the household activities. For example, the phone should not be in the living room next to the TV set, or the rest of the family would not be able to watch television while the mother was working. Also make certain that the phone is not on the wall.

Go over the interviewing technique with her; then do 15 minutes of practice for her. See if you can get her to do 15 minutes for you. Sometimes reporters are extremely nervous about this. Explain to her that we realize she will be nervous and make mistakes, but it will help her in the long run, and also explain that while she, and you, may know she is making an error, the person on the other end of the phone does not. Leave the reporter with eight sheets and have her do 2 hours of interviewing. Explain that it is only practice work and that it can be done anytime between 8 a.m. to 11 p.m. Make an appointment to go back after she has completed the practice work.

When you return, go over the work that she has done. Training, in one sense, varies with the individual being trained. Some new reporters are quick to learn, others require a time to be alone reading the material and, therefore, when you return to pick up the practice work you are the best judge as to whether the training will require another visit.

For this is what is still left to be done:

1. Explain the division of the phone book and her place in it.
2. Wired results.
3. The pink part of the TV instruction.
4. Radio instructions.
5. Qualitative Research, Inc.
6. Explain nickeling.
7. Explain that you, or another supervisor will periodically visit her to check her work.

You must collect from her (1) practice work; (2) application blank; (3) two signed (in ink) copies of the contract form—with both your signature and hers on them.

Send all of the above along to us with a copy of her assignment in the phone book and the time and expenses you incurred.

PLEASE REMEMBER AND NOTE

If, when you see her practice and after you have discussed it and her questions, you feel that she will not work out because she's sloppy, too nervous, insists upon doing things her way, do not hire her. If a new interviewer starts giving trouble the first time you meet her, you'll continue to have trouble with her. Please do not confuse the above with someone who is merely nervous because it is new work to her, or who is the type with whom you have to work slowly. But your reporters must be competent and willing to take instruction, corrections, and orders from you and this office. Believe me, if you have doubts, it is much better not to hire them, no matter how desperate you may be.

Again, there is no set rule for telling a person they will not work out. It is easiest to merely point out your reasons and then help them convince themselves that they would be happier in doing something else. Usually, they will see it your way.

RETRAINING

It is possible, that from time to time, you will be requested by the office to visit and retain an interviewer. When you are requested to do so, call the interviewer and explain that the office would like you to go over whatever point is under question and make an appointment to see her. Ask her to prepare two interviewing sheets; when you keep the appointment, have her interview for you. At that time you can take up the problem. When you return, send us a note about the correction, your expenses and any comments you may have.

PHONE BOOKS

The supervisor will divide the telephone directories so that each member of her staff has her own place in the directory. In most cases there are four columns to each page of the telephone directory and the easiest thing is to assign each reporter one column, say of the even pages, another the first column of the odd-numbered pages, etc. This will take care of eight reporters. When you have a staff of more than eight, then divide the directory in two parts, i.e., if the first page in the directory is 2 and there are 200 pages in it, the first half of the book would be from page 2 to page 101, and the second part from 101 to 200, then you could give someone the first column on the even pages from 2 to 100, and another the first column of the odd pages from 3 to 101. In this manner you will have enough for 16 reporters.

When you are instructing a new reporter on the phone book, impress upon her that she must restrict herself to her column and her pages, and that when she comes to the last residential number on the last of her pages, she returns to the beginning of her assignment and works through the phone directory again.

PAY RATE, TAXES, CONTRACT FORMS

Make certain that the new applicant understands the pay rate—how interviewing is paid and when payment is made.

Each reporter is paid on a compeleted sheet basis—25 cents for each completed single sheet and 50 cents for each double sheet. This amount includes 13 minutes of calling (in the case of a single sheet) and the preparation of the numbers on the interviewing sheet. Certainly this should take no longer than a minute or two. Reporters are not paid on an hourly basis.

Taxes

Under the new law, passed the latter part of 1955, reporters are considered, not employees, but independent contractors, and as such we cannot withhold taxes from their wages. Certain rulings are still in the process of being made and when presented to us, we will forward them to you. A form #C will be supplied to each reporter at the end of the year. This is not a W–2 form, but an information form for her use and guidance in preparing any tax returns she may make.

Contract (applies primarily to traveling supervisors)

Explain to the reporter that this is for her protection. From time to time supervisors, in hiring reporters in towns in which they live, have been asked "After you've trained me and I work for a month, how do I know I'll be paid?" This is the answer; the two forms will be signed, sent to New York, signed by a representatives of the company and one copy will be returned to the new interviewer, the other kept in her file in the New York office.

The important part of the contract form for local supervisors is that it will enable you to remove from your staff any reporter at any time—someone not working out satisfactorily, a careless or troublesome reporter without reason.

It is important, however, that you do not fire the reporter in person for any reason whatsoever without notification and approval by one of the field staff supervisors working out of the New York office. A letter must be sent from New York to terminate the contract, and to send them their last check. Even if you train a reporter, she does practice and for any reason at all such as—

1. She does not feel she wants to undertake the work.
2. Some personal thing has come to prevent her from taking the job.
3. You feel she'll be unsatisfactory.

You must not pay her in cash for the practice work she has done. This must be in check form even if it is a sum like 25 cents. That is the law.

SUBSTITUTIONS

Please make certain that when substitutions occur that, if there is time you notify the office. Sometimes programs are taken off the air, or questions may be changed and we must be able to contact them from here if we cannot reach the supervisor.

There should be little need for wholesale switching of schedules or substitutions. Granted there are emergencies, but one woman, for example, should not require say three or four substitutions in 1 week, because of her social life.

MISSING WORK

There should be no missing work, and for this reason each supervisor should have at least one substitute on her staff. Sometimes a phone will go out of order, or some other emergency arise when a reporter cannot work or reach her supervisor, but there is no excuse for dropping say 15 minutes because of a long-distance call. The reporter can always tell the long-distance operator to call back, either on her 2-minute break, or after she has finished surveying. Work that is missed cannot be made up. We cannot put a program back on the air.

NICKELLING

As you know we work for the radio and TV industries and the work which your staff does is sometimes responsible for changes in programs, people losing their jobs, etc., and for this reason we must be able to prove to that industry that our reporters are working when they should be. For this reason nickelling was evolved, and it is just a case of checking individuals while they are working, by the only means available to us, the phone.

Here are your instructions:

Do not begin nickelling, until the interviewer has completed at least one-half hour of work.

Begin dialing the interviewer's number at precisely the time she should begin her second half hour. For example, should she be working from 7 to 8 p.m., you would begin dialing at 7:32 p.m. Should the line be busy, place a checkmark in the space below. You will keep dialing each 5 minutes thereafter until you have done so for an hour, or you have broken through and she has answered the phone. When this occurs, follow along below:

Name of interviewer_____date_____
Time interviewer is working_____to_____
The time is now_____(please place the correct hour in below).

	Busy	*Not busy*		*Busy*	*Not busy*
:02			:32		
:05			:35		
:10			:40		
:14½			:44½		
:17			:47		
:20			:50		
:25			:55		
:29½			:59½		

When you break through and the reporter speaks to you say:

"This is a Trendex supervisor. Please give me the telephone numbers of the last two respondents with whom you spoke; that is, the last two persons who said they were either looking or listening or not looking or listening."

(Supervisor list those numbers here)

	Listening or looking	*Not listening or not looking*
No. 1		
No. 2		

Then ask the reporter:

"Did (and say the No. 1 telephone aloud) report listening or looking?" (Mark with a check alongside of No. 1 to show what the respondent told the reporter.)

Repeat the above for No. 2.

Tell the reporter to get on with her work, then.

You are then to call the two numbers listed above and say to each: "This is a supervisor of radio and television reporters, did someone call your home a few moments ago to inquire if you were listening to your radio or looking at television?" Record the information you are given alongside of these numbers:

No. 1. _____ line was busy _____. Didn't answer _____. Respondent reported listening to radio or looking at TV _____. Respondent reported no listening or not looking _____.

No. 2. _____ line was busy _____. Didn't answer _____. Respondent reported listening to radio or looking _____. Respondent reported not listening or not looking _____.

Name of supervisor _____. Job completed at _____.

It is a difficult thing to think of but there is always unfortunately the possibility that the person you are nickeling may not be working * * * if this is so, wire me immediately and tell the reporter to stop any future assignments until you or she hears from this office.

This is not to be construed as a reflection on honesty, but rather a business practice made necessary by the fact that interviewers are working away from supervision.

When you explain nickeling, tell the reporter that they may be nickeled at any time they are working, either by you, or by someone from New York. It

is a horrible thing to think about, but if you should call a reporter who is either not working when she should be and has no excuse, or whose numbers do not check back, please notify the office by wire immediately. The most important thing to remember is to repeat to the interviewer the telephone numbers as you get them from her. If when you call and the person there says that he or she had not been called, repeat the number to them for verification.

General Information for Supervisors

Compensation: You are paid $15 per month as a retainer, this is to arrange substitutions, make certain people are working and assign last minute jobs.

In addition, you are paid $1 an hour—

1. For hiring and training (plus expenses incurred in such training).
2. For retraining, semiannual visits to your staff.
3. For nickeling.
4. For time spent in correction of reporters, either by phone or in person.

PROGRAMING

This will give you a little background on why we often ask you to wire what program is carried on a particular station at a particular time.

We are often requested by a client to produce a rating on a new show going on the air. The client will have ordered, from the network broadcasting the program, that this be transmitted to say 100 television or radio stations.

The network then requests each of the 100 stations to carry the program. Unfortunately, however, it is possible that the local station in your city already has a commitment for that time. It reports to the network that it will take the national program, but probably not the first broadcast. Now this local station must let the network know whether it did or did not accept the first broadcast so the network knows how much to charge the client. But it does not have to this for 2 weeks.

Therefore, when we are rating a certain program, we are given all of the markets that it is in and then provided with a list called "possibilities" and should your city be so listed, we would then wire you to let us know what program was actually carried at that time.

I realize that you cannot possibly watch the program, but I do request that you check your local daily paper for this information, not TV Guide or some weekly TV log, because the weekly guides are made up 2 to 3 weeks ahead of time and might list the old program.

Also your wire to me need include only the time, station, and program, for example, 9 p.m., CBS, Ford Star Jubilee—that's all.

When we get your wire we then can calculate the ratings based on the number of cities that actually showed the program, and those that did not.

For the same reason, we request the information on baseball. When we get wired results from interviewers we cannot tell which programs actually were on. When the interviewing sheets come in, of course, it is easy. Therefore, we have you let us know that baseball was carried at a certain time on a certain channel. Then we know that the program normally carried at that time could not be on because you had a night baseball game.

WIRED RESULTS

When wired-results schedules, and only scheduled assignment is made up, it is sent to you in the way we need it.

This may not completely correspond to the schedule which exists in your city; unfortunately, there are always a few. Therefore, if you have one reporter working from 5 to 7 p.m. and one from 7 to 8 p.m. and the wire schedule says, "Wire 5 to 7:30 p.m. by 2½-hour totals," your one reporter would wire 5 to 7 p.m. by 2-hour totals and the other 7 to 7:30 p.m. by the half hour.

Also, if the schedule requests cumulative totals for Thursday plus Friday and due to some reason one reporter is interviewing Thursday and another is interviewing Friday, each would send a telegram—one for Thursday and one for Friday.

Cumulative totals are requested because we know Thursday's mail will not reach us in time, and instead of working with two sets of wires, all can be combined in one telegram.

FORMS

Attached are copies of the forms you should use—it will make it easier for you and for us. Remember that timesheets cannot be mailed on the 30th from your home and be included in compensation mailed from here on the first of the month.

NOTE.—Just remember you have been appointed as the supervisor because we think you are the best person for it and are eminently qualified for it. All of the New York staff is at your disposal for assistance or for answering questions. Please do not be afraid to call on us.

We know there will be times when perhaps you need the answer to a question and the office is not open (office hours, incidentally, are 9 to 5 p.m., Monday through Friday). The only thing you can do is to make whatever decision has to be made to the best of your ability—right or wrong you have to make it. Your field staff department will back you in this decision. All you can do is write and let us know what you did and your reasons for it.

Good luck.

2. MATERIALS FURNISHED BY THE PULSE, INC., INCLUDING SAMPLE QUESTIONNAIRES, INSTRUCTIONS TO INTERVIEWERS, SPECIAL STUDIES OF VIEWERS' OPINIONS OF PROGRAMING, ETC.

JUNE 27, 1958.

MR. NICHOLAS ZAPPLE,
Communications Counsel of the Senate Interstate and Foreign Commerce Committee, Capitol Building, Washington, D.C.

DEAR MR. ZAPPLE: I want to express once again that I was very pleased to have had the opportunity to appear yesterday at your committee hearings.

Enclosed are copies of the additional material which I promised to send you. This includes some of our questionnaires, which you can see are simple recording forms, and the time-line association technique spelled out much along the lines which I discussed yesterday.

In addition, I am including several copies of questions used in research which we have made dealing with likes and dislikes of programs. It is my feeling that Senator Monroney would like to know that such research is being done. These studies were made for advertising agencies and networks. If you believe that you would like to see the results, I will ask our clients for permission to submit them to the committee. I feel that these questionnaires should be in your hands so that you can see that there is such research in the industry.

I have also included a few additional news releases and pulsebeats relating to additional aspects of research.

Sincerely yours,

SYDNEY ROSLOW, *Director.*

THIS PROGRAM SCHEDULE MUST BE SHOWN TO ALL RESPONDENTS

F

NEW YORK TV ROSTER MONDAY 1958 THE PULSE, INC.

		6:00 P.M.	6:15	6:30	6:45
WABD	5	Bugs Bunny	Bugs Bunny	Looney Tunes--------With S.Becker	
WCBS-TV	2	Early Show----------"Woman Of The Year"-With Spencer Tracy--And Katherine Hepburn			
WNTA-TV	13	Richard Willis------Show		Discovery	Discovery
WOR-TV	9	Roy Rogers----------Show		Roy Rogers----------Show	
WPIX	11	Popeye The----------Sailor Man		Amos 'n' Andy	Amos 'n' Andy
WRCA-TV	4	Movie Four-"Woman---Of The W.Country"		News,Wea,Sports	Nws-Huntley-Brinkley
WABC-TV	7	Little Rascals	Little Rascals	The Falcon	The Falcon

		7:00 P.M.	7:15	7:30	7:45
WCBS-TV	2	News,Weather	News-Edwards	Robin Hood----------With R.Greene	
WNTA-TV	13	The News Game	The News Game	Film "Boys From-----Brooklyn"	
WOR-TV	9	Terrytoone----------Circus		Million Dollar-------Movie	
WPIX	11	News,Weather	News-Tillman	Grey Ghost	Grey Ghost
WRCA-TV	4	Highway Patrol------With B.Crawford		Haggis Baggis	Haggis Baggis
WABC-TV	7	Sports,Wea	News-J.Daly	Written Word	Written Word
WABD	5	Bengal Lancers	Bengal Lancers	Assignment----------Foreign Legion	

		8:00 P.M.	8:15	8:30	8:45
WNTA-TV	13	Film "Boys From-----Brooklyn"----------With Bela Lugosi			Preview,Baseball
WOR-TV	9	Million Dollar Movie"My Favorite Wife"--With Irene Dunne &--Gary Grant			
WPIX	11	City Detective	City Detective	San Francisco--------Beat	
WRCA-TV	4	Restless Gun---------John Payne		Tales Of Wells-------Fargo-Dale Robertson	
WABC-TV	7	Cowtown Rodeo	Cowtown Rodeo	Bold Journey	Bold Journey
WABD	5	Mr.District----------Attorney-D.Brian		Confidential---------File	
WCBS-TV	2	Burns And Allen	Burns And Allen	Arthur Godfrey's-----Talent Scouts	

		9:00 P.M.	9:15	9:30	9:45
WOR-TV	9	Harbor Command-------With Wendell Corey		Science Fiction------Theatre	
WPIX	11	Man Behind----------The Badge		Inner----------Sanctum	
WRCA-TV	4	Twenty One----------With J.Barry		Alcoa Theatre	Alcoa Theatre
WABC-TV	7	Stars Of------------Jazz		Polka-Go-Round	Polka-Go-Round
WABD	5	Racket Squad---------With Reed Hadley		Boxing	Boxing
WCBS-TV	2	Danny Thomas---------Show		December Bride-------With S.Hyington	
WNTA-TV	13	Baseball-Dodgers-----At St.Louis		Baseball-Dodgers-----At St.Louis	

		10:00 P.M.	10:15	10:30	10:45
WPIX	11	Public Defender	Public Defender	Dr.Hudson's----------Secret Journal	
WRCA-TV	4	Suspicion	Suspicion	Suspicion	Suspicion
WABC-TV	7	Polka-Go-Round	Polka-Go-Round	Man Of----------Annapolis	
WABD	5	Boxing	Boxing	Boxing	Sports-Schenkel
WCBS-TV	2	Studio One----------In Hollywood		Studio One----------In Hollywood	
WNTA-TV	13	Baseball-Dodgers-----At St.Louis		Baseball-Dodgers-----At St.Louis	
WOR-TV	9	Million Dollar Movie"My Favorite Wife"--With Irene Dunne-----& Gary Grant			

		11:00 P.M.	11:15	11:30	11:45
WRCA-TV	4	Nws-McCaffery,Wea	The Jack Paar-------Show		Jack Paar Show
WABC-TV	7	Shock Theatre"The----Spy Ring" With-------Jane Wyman			Shock Theatre
WABD	5	Five Star Movie------"Ranrod"With---------Joel McCrea			Five Star Movie
WNTA-TV	13	Baseball-Dodgers-----At St.Louis		Baseball	Sports
WCBS-TV	2	News,Wea,Sports	Late Show "Tight----Little Island"-------Basil Radford		
WOR-TV	9	Million $ Movie------"My Favorite Wife"		Boston Blackie-------With Kent Taylor	
WPIX	11	News-Nimmo	Sports,Trap---------Mysteries		Trap Mysteries

CHECK NEWSPAPERS FOR ALL SPORTS EVENTS & NAMES OF ALL FEATURE FILMS

WC PULSE Time ....Inter..... 6 PM—12 Midnight

TODAY IS: Mon. Tues. Wed. Thurs. Fri. Sat. Sun.
(Circle day of week)

1. Do you have a radio? Yes..... No.....
   Do you have an FM radio? Yes..... No.....
   Do you have a Television set? Yes..... No.....
   UHF Yes..... No.....
   Color Yes..... No.....

2. Are any of these sets in use now? Yes..... No.....
   Radio Station ..... Program.....
   TV Station ..... Program.....

3. Were any sets in use last night between

   6 – – – – 7 7 – – – – 8 8 – – – – 9

   9 – – – – 10 10 – – – – 11 11 – – – – 12

   Sets in use: Yes..... No.....

3a. Obtain times when sets were on. Show rosters for these times and ask: *"Which of these and other programs did you or anyone else in the house listen to or view at these times?"*

(Record call letters and ages of listeners and viewers at the right)

Phone: Yes..... No..... Rent (or estimated).....

Respondents: M – – F – – (Enter ages) Des.....

Name .....
Please Print

Address ..... Apt. No.....

City .....
Please Print Full Address

	RADIO 1	(ENTER AGES) Male	Female	RADIO 2	(ENTER AGES) Male	Female	TV	(ENTER AGES) Male	Female
6:PM									
6:15									
6:30									
6:45									
7:PM									
7:15									
7:30									
7:45									
8:PM									
8:15									
8:30									
8:45									
9:PM									
9:15									
9:30									
9:45									
10:PM									
10:15									
10:30									
10:45									
11:PM									
11:15									
11:30									
11:45									

Pulse, Hartford, Conn., area

[Today is ....., 12 midnight to 6 a.m. today. Time ..... Interviewer .....]

1. Do you have a radio, Yes.... No....
   an FM radio, or a Yes.... No....
   television set? (Check.) Yes.... No....
2. Are any of these sets in use now? Radio station ..... Program .....
3. Did you or any member of your family listen to a radio at home or away from home today between—12 p.m. to 1 a.m.; 1 to 2 a.m.; 2 to 3 a.m.; 3 to 4 a.m.; 4 to 5 a.m.; 5 to 6 a.m.? No sets today .....
4. Obtain times, show roster and ask—"Which of these and other programs did you or anyone else in the house listen to at these times?" (Record call letters at right.)
5. Who listened? (Record ages at right.)
6. Where did you (he, she) listen? (Record in "Place column" at right.)

Respondents: M.... F.... (Ages) Des: .....
Phone: Yes.. No... Rent: (or est.).....

Name .....
Address ..... Apt. No. .....
City .....

In home and out-of-home (enter ages)

	Radio	M	F	Place
12 p.m.				
12:15				
12:30				
12:45				
1 a.m.				
1:15				
1:30				
1:45				
2 a.m.				
2:15				
2:30				
2:45				
3 a.m.				
3:15				
3:30				
3:45				
4 a.m.				
4:15				
4:30				
4:45				
5 a.m.				
5:15				
5:30				
5:45				

Pulse, Birmingham, Ala., area

[Today is ....., 6 a.m. to 3 p.m. today. Time ..... Interviewer .....]

1. Do you have a radio, Yes .. No ..
   an FM radio, Yes .. No ..
   or a television set? Yes .. No ..
   (Check)
   UHF Yes .. No ..
   Color Yes .. No ..
2. Are any of these sets in use now?
   Radio station .... Program ....
   TV station ..... Program ....
3. Did you or any member of your family listen to a radio at home or away from home today between—6 to 7 a.m.; 7 to 8 a.m.; 8 to 9 a.m.; 9 to 10 a.m.; 10 to 11 a.m.; 11 a.m. to 12 m.; 12 m. to 1 p.m.; 1 to 2 p.m.; 2 to 3 p.m.?
   No sets today .....
3a. Did you or any member of your family watch television at home today between—6 to 7 a.m.; 7 to 8 a.m.; 8 to 9 a.m.; 9 to 10 a.m.; 10 to 11 a.m.; 11 a.m. to 12 m.; 12 m. to 1 p.m.; 1 to 2 p.m.; 2 to 3 p.m.?
   No sets today .....
4. Obtain times, show roster and ask: "Which of these and other programs did you or anyone else in the house listen to or view at these times?" (Record call letters at right.)
5. Who listened or viewed? (Record ages at right.)
6. Where did you (he, she) listen? (Record in "Place column" at right.)

Respondents: M .... F .....
(Ages) Des: .....
Phone: Yes .... No ..... Rent: (or estimate) .....
Name .....
Address .....
Apartment No. .....
City .....

In home and out-of-home (enter ages)

	Radio No. 1	Radio No. 2	Place	Enter ages M	Enter ages F	TV at home	Enter ages M	Enter ages F
6 a.m.								
6:15								
6:30								
6:45								
7 a.m.								
7:15								
7:30								
7:45								
8 a.m.								
8:15								
8:30								
8:45								
9 a.m.								
9:15								
9:30								
9:45								
10 a.m.								
10:15								
10:30								
10:45								
11 a.m.								
11:15								
11:30								
11:45								
12 m.								
12:15								
12:30								
12:45								
1 p.m.								
1:15								
1:30								
1:45								
2 p.m.								
2:15								
2:30								
2:45								

TELEVISION AND RADIO SURVEY INSTRUCTIONS INTERVIEWING DAYS JUNE 27 TO JULY 3

(Pulse: New York, July 1958)

1. Please interview with a gold and white in each home you visit between the hours of 4 p.m. and 6 p.m. Please interview with a green and pink in each home you visit between the hours of 6 p.m. and 8 p.m. Check all homes not owning a radio or TV set. Check all the refusals and the not at homes on the special tan listing sheet provided for that purpose. Be sure to carry your identification card, immediately available, at all times.

2. You must mail the completed interviews to the Pulse, Inc., at 730 Fifth Avenue in New York City each day at the completion of the green and pink interviews. At that time each day you must mail everything you have completed up to that point. If you delay in mailing, we will not pay for the work. Be sure your name, address, and market area are on each envelope.

3. Please be sure to fill out the top line on the questionnaires properly. Use the name of the day the program schedule refers to. Time, means time of day at which the interviews were made. Record this to the nearest minute as 7:14, 12:36, etc. Circle the day on which the interviews were made.

4. Use every effort to make the persons interviewed realize that we want to know the actual listening and viewing they did during each quarter hour of the time period in question. Many people report listening and viewing when they did none, and others fail to report all their listening and viewing.

5. Call attention to the listening and viewing of the other members of the family—the children, the husband, or the wife—invite them all to participate in the interview.

6. If the persons interviewed report listening and/or viewing but don't know the programs, we accept this as "don't know" and you may write "D.K." in each quarter hour block where this applies. In these cases ascertain the time as accurately as possible. Such phrases as "all afternoon" do not tell when. We know that people listen to and view other programs and other stations not shown on the roster. When this happens, obtain these stations' call letters or channel numbers. Never enter a checkmark only.

7. *Audience composition.*—For every program that is seen or heard you must get the sex and age of all persons that heard or saw that program.

8. Record "J" for Jewish, "S" for Spanish, "I" for Italian, "N" for Negro and all other "X" in the "Des" block.

9. Be sure that the persons interviewed study the roster carefully. Help them find the stations and quarter hours. Do not accept "all hour" as an answer. Determine definitely which quarter hour started and which quarter hour ended the set usage. Do this by first getting the respondents to report approximately what hours they listened or viewed. Remember, this is a family interview.

10. *Followup.*—The work of each interviewer will be regularly verified by having followup calls made from the office. All names and addresses must be filled in carefully and clearly.

11. Buy the newspaper every day of the survey week and use its radio and television program schedule to supplement our roster for last minute changes. Include the newspaper schedule with your mailing daily.

DEAR PULSE INTERVIEWER: This is the "time-line" approach—your guide to good interviewing—your aid to pinning down the exact time everyone in the family turned on radio and/or TV before you show the roster to verify each program or part of the program.

Pulse surveys are based on this procedure—it is a must. So please read carefully.

Ask about radio first down the time line, then go to TV—same procedure.

You are in the home; you are asking about the listening and/or viewing for certain hours of the day. Be specific. Mention each hour, give the respondent(s) a brief pause after each one. "Do you recall when you turned you radio on?" Use the following probes—they will help recall normal activities of the day which radio and TV are a part of. Direct these aids to each member of the family. When the time is fixed, then show the roster to verify. Please remember, the respondent(s) tells you—no suggestion of programs or station.

IN HOME

When did you get up this morning?
Radio then or clock radio?
While dressing or having breakfast?
What time any radio?
When the grownup left for work or the children for school—what time?
Did they turn radio off then?
When did you straighten, dust the house, etc.? Radio on then?
Did you go out shopping this morning? When? When did you return?
Radio off or on? Prepare for lunch? When? At lunch? Radio on?
Now after lunch? Did you go out? When? When did you return? Radio off and on?
Any household chores this afternoon? About what time?
Radio going while you tending to these activities? Any visitors this afternoon? When? Radio on?

OUT OF HOME

When did the grownups and children leave home this morning?
When did they go and how? By car—any radio? Breakfast out? Any radio?
At work—at school visiting—when? Any radio?
Lunch time—where? Any radio?
Afternoon period—at work, at school, visiting, shopping—any radio listening?
Use of car to go anyplace—when? Radio in use?
Rest periods at work? Any radio?
Returned home late afternoon or evening? Who? How traveled home? Car—radio in use?
Dinner out? Where? What time? Was there a radio?
Did anyone go out in the evening? Who? How traveled? Where? Any radio in use in car or place visited?

[The Pulse Beat, published periodically by the Pulse, Inc.]

FEBRUARY 4, 1957.

CURRENT PROGRAMS BETTER THAN THOSE AIRED IN PREVIOUS YEARS; "PLAYHOUSE 90" BEST OF NEW PROGRAMS

Despite the fact that 1956–57 television programing has been severely criticized by TV reviewers, the vast majority of people in metropolitan New York feel that this year's programs are better than those shown in the past few years. This was revealed by a special Telepulse survey conducted during November 1956 among a cross section of 1,073 New Yorkers.

In that survey, only 8.2 percent felt that this year's programs were not as good as those televised "in the past few years;" 32.6 percent thought they were about the same; with 59.2 percent preferring the current program fare.

When questioned as to which new programs they particularly liked, almost a third (31.7 percent to be exact) mentioned "Playhouse 90." "Lawrence Welk's Top Tunes" was next in line with 7.2 percent of the viewers mentioning this program.

While one-third of the people questioned said there was no new show they "particularly liked," only 26.3 percent answered affirmatively when queried as to new programs they "did not particularly like."

This Pulse survey also checked viewers as to programs no longer on television which they would like to see back. On this score, "Mama"—which has since returned—was the No. 1 choice with 16.7 percent of the people wanting this program back on the air. Other programs mentioned included "Millie" (2.9 percent), Milton Berle (2.3 percent), "Our Miss Brooks" and "It's A Great Life."

[The Pulse, Inc., news release, for use on Monday, Oct. 21]

From: Lou Frankel.

PULSE SURVEY OF SAN FRANCISCO AND LOS ANGELES TV HOMES SHOWS 13 PERCENT WILLING TO PAY FOR BASEBALL ON TV; BUT FEW WOULD PAY MORE THAN TWICE WEEKLY

A special Pulse study of the San Francisco and Los Angeles TV markets, completed early in September, revealed that 13 percent of the TV homes in each market would be willing to pay to see the Giants and Dodgers, respectively, on home television. In round numbers this means that 107,700 TV homes in San Francisco, and 243,200 in Los Angeles would support pay-TV baseball.

Most of these would pay to see one game a week at home, and a majority would pay to see two games a week via pay TV; after that the audience falls off sharply. Here is the breakdown:

	Los Angeles	San Francisco
Would pay for TV:	*Percent*	*Percent*
1 game	92	91
2 games	59	69
3 games	16	30
Every game	5.5	1
Don't know	8	9

A similiar dropoff is apparent in the sum the viewers would be willing to pay to see baseball on home TV. Almost every home would be willing to pay 25 cents per game, and a majority would pay 50 cents per game, but very few would pay 75 cents or $1 per game. The breakdown:

Would pay per game—	Los Angeles	San Francisco
	Percent	*Percent*
25 cents	98	97
50 cents	54	63
75 cents	21	19
$1	15	8
Don't know	2	4

This Pulse Study was conducted in the homes of viewers of baseball on television. In San Francisco baseball on TV is available on Saturday only; two major league games on two channels with the game starting before noon; plus a Pacific Coast League game in the afternoon. In Los Angeles baseball is a Saturday and Sunday program for TV; major league games on two channels Saturday morning, minor league on another station Saturday and Sunday afternoon.

This special study was undertaken to acquire definitive information on the box office potential of pay TV in these two new major league towns after a previous Pulse report, based on a pay-TV study in New York City, created exceptional interest. The previous report utilized the New York data to estimate what the Dodgers and Giants might gross from pay TV on the west coast.

"The crucial factor uncovered by the west coast study on the potential of pay TV baseball," said Dr. Sydney Roslow, the president of Pulse, Inc., "is the number of times the TV viewer would pay, per week, to see baseball in the comfort of his home. The sharp dropoff indicates that the consumer is aware of the comfort potential of pay TV but is also perturbed by the cost of this luxury. If, and when, pay TV baseball becomes a reality, this is a factor the entrepeneurs of the new medium will have to cope with."

[The Pulse Beat, published periodically by the Pulse, Inc.]

MAY 24, 1957.

MYTH OF UNATTENDED DAYTIME TV SETS IN USE DISPROVEN BY SPECIAL TELEPULSE SURVEY

In 85 percent of the homes where a television set was on during a typical afternoon half hour, some member of the family was watching the program being shown. And, in 88 percent of these viewing homes, the audience included a woman member of the family.

Conversely, the TV set was "unattended" (i.e., no one was watching) in only 15 percent of the homes using television.

These findings were revealed by a special door-to-door coincidental survey by Telepulse. The study was based on a check of 1,263 homes throughout the metropolitan New York area conducted between 3:30 and 4 p.m. on January 2, 3, 4, 7, and 8, 1957 (i.e., Monday through Friday afternoon).

The survey was undertaken because of erroneous opinions about a low to (1) daytime TV audience, and (2) absence of viewers, in homes using television, during the daytime.

Pulse interviewers first obtained permission to look at the set in the home on the pretense of conducting a survey of make and model television sets. After personally checking as to whether the set was in use, the interviewer asked "Who, if anyone, was watching television at the moment that I rang the doorbell?" (This same procedure was followed where a family reported ownership of more than one TV set.)

The major survey results are shown below (and relate to Monday-through-Friday viewing from 3:30 to 4 p.m.).

1. Homes using television, 22.3 percent.

2. In 85.2 percent of these homes, one or more persons was actually viewing the program at the time of the interview. (In the remaining 14.8 percent of the homes, the set was "unattended.")

3. If the "unattended" sets are eliminated the homes using television figure is reduced to 19.0 percent.

4. In these actual-viewing homes * * * there were an average of 174 viewers per 100 homes, distributed as follows:

Viewers per 100 homes

Men	15
Women	105
Teens	15
Children	39
Total	174

5. And, in 88 percent of these same "viewing" homes, the audience included a woman member of the family. (If we convert back to a base of all homes using TV, including those where the set was "unattended," we find that women were viewing in 75 percent of all homes where the set was turned on.)

These figures prove that there is a vast audience of daytime viewers * * * that only in a small proportion of the homes is the set playing to an "empty room" * * * and women comprise the vast majority of the audience.

[The Pulse, Inc., news release]

From: Lou Frankel.
For release: On Receipt.

USE RATINGS THE WAY YOU INVEST IN STOCKS BY LOOKING AT MORE THAN THE LATEST PRICE, SAYS LAURENCE ROSLOW OF THE PULSE, INC.

"The intelligent user of broadcast research will use ratings in the same way he uses information in preparing to invest in the stock market," said Laurence Roslow, associate director of the Pulse, Inc., yesterday (Thursday, March 27) afternoon in a talk before the Television and Radio Advertising Club of Philadelphia.

"In selecting a stock the intelligent investor looks at more than just the closing price of that security. He studies its yield, its history, and examines many other economic factors before deciding; unless he is an out-and-out gambler. The intelligent user of broadcast ratings is also no gambler and, in addition to the rating he ascertains how it was obtained, what it means, and the competitive and historical record of the time slot, the program and the station.

"For this man knows that the rating is just one element, one dimension, in preparing an intelligent advertising campaign; just as the price of the stock is only on consideration in determining an intelligent investment.

"Unfortunately too may users of ratings," continued Dr. Roslow, "do not realize that each research organization measures in a slightly different manner, with different size sample, and even vary as to the size of the same market.

"The Pulse measures radio and television audiences in metropolitan markets, using a personal interview technique, with a sample, larger than any other service, that affords each home an equal opportunity to be in the sample, and measures the listening and viewing of every member of the family.

"Anyone using ratings," explained the Pulse executive, "should consider how the ratings were obtained, what type of research was used, what was measured and when. Without this knowledge, the rating is just a figure that means only what its user wants it to mean.

"And since ratings are used both by program and sales people, it is obvious that each of them wants the ratings for a different purpose. Yet, too often each of them will use ratings without additional information and without knowing what they mean. If they invested in the stock market in so unintelligent a manner, their portfolios would be short on blue chips and overlong on blue sky share."

March 28, 1958.

[The Pulse, Inc., news release]

SINGLE INDUSTRY RESEARCH METHOD COULD DECIMATE RADIO–TV, SAYS DR. ROSLOW, OF PULSE, AT SYRACUSE UNIVERSITY: POINTS TO AUDIT BUREAU OF CIRCULATIONS AND DECREASE IN NUMBER OF NEWSPAPERS AND MAGAZINES

Dr. Sydney Roslow, president of the Pulse, Inc., research organization, said yesterday, Tuesday, April 15, that one logical reason for the steady decline in the number of newspapers and magazines was the reliance of these print mediums on one major measurement organization, the Audit Bureau of Circulations, and warned that the broadcasting industry might also find itself negatively affected should it embrace a single research method.

Talking before the graduate students of the Syracuse University Radio and Television Center, where he was guest professor on television, on Monday evening, April 14, and in two sessions on Tuesday, April 15, Dr. Roslow pointed out that, "The broadcasting industry uses its research to do more than just count heads. Where the Audit Bureau of Advertising provides a physical count—the number of papers sold—the broadcaster gets more than just numbers out of research.

"The researcher in radio and television gages, as well as counts, the audience. We provide data on social, educational, financial, age, and sex of the listener and viewer; and we also provide information of the effectiveness of programs and time segments and commercials. Compare this," continued Dr. Roslow, "with the Audit Bureau which provides a physical count. This type of research has led advertisers using print media to the blind acceptance of one evaluation of the advertising effectiveness of a newspaper, namely its circulation.

"We at the Pulse feel that head counting is not a proper scale on which to evaluate newspapers and magazines. We also feel that this blind reliance on circulations has forced numerous newspapers and magazines out of business simply because the publishers of those periodicals did not have information to show, for example, that while their circulation might only be second or third in numbers the readership of their features and advertisements might possibly be more effective than those in the top circulation medium.

"In radio and television we measure more than just numbers and the multiplicity of research services provides every station with an opportunity to research out its strong points. The proof of this lies in the number of radio and television stations which are not No. 1 in heads or homes, but which are daily proving their effectiveness for local and national advertisers.

"Actually," concluded the president of the Pulse, "the most prosperous print mediums today are those doing the sort of readership research noted above. This sort of data, plus the circulation figures, are required for effective selling. And the number of deceased periodicals are a mute testimonial to the shortsightedness of the publishers of those papers in their blind reliance on one method of measurement. A similar reliance on one method of measure could well decimate the ranks of radio and television stations. Because no absolutely perfect system of measurement exists or will ever be developed."

Pulse Sp St 355L4A

CIRCLE THEATER VIEWERS

I noticed that you viewed the Circle Theater last night. I wonder if I might ask you some questions about it.

1. Could you tell me who sponsored the program?
2. Generally, how do you personally feel about the show?
   Liked it very much.
   Liked it fairly well.
   Neither liked nor disliked.
   Disliked somewhat.
   Disliked very much.

2*a*. Why?_____

3. I wonder if you could tell me what the main idea of the program was?
4. Can you tell me what products were advertised during the course of the program?
5. (For each product mentioned:) Could you tell me what was said about the _____ product?
6. How would you rate each commercial presentation:

	Good	*Only fair*	*Poor*
Quaker rugs:			
Sincerity and believability	( )	( )	( )
Holding your interest	( )	( )	( )
Exalon:			
Sincerity and believability	( )	( )	( )
Holding your interest	( )	( )	( )

7. What did you think of the announcers?

	Liked	*Disliked*
Man	_____	_____
Woman	_____	_____

7*a*. Why?_____

8. Could you tell me what products are made by the Armstrong Co.?

Pulse Sp St 355L4B

CIRCLE THEATER NONVIEWERS

I noticed that you did not view the Circle Theater program last night.

1. Have you ever watched the program? Yes_____. No_____.
2. When did you last view the program?

A week ago_____( )
2 weeks ago_____( )
3 to 4 weeks ago_____( )
More than a month ago_____( )

3. I wonder if you can tell me who sponsors the program?
4. Generally, how do you feel about the shows you have seen on the Circle Theater:

Liked them very much_____( )
Liked fairly well_____( )
Neither liked nor disliked_____( )
Disliked somewhat_____( )
Disliked very much_____( )

4(*a*) Why?_____

5. What did you think of the announcers?

	Liked	*Disliked*
Man		
Woman		

5(*a*). Why? _____

6. Could you tell me what products are made by the Armstrong Co.?

EXPLANATION

This survey was conducted between 8 and 8:30 p.m. on Thursday, June 5, 1958. Interviewing was conducted in the New York metropolitan area. Of the 200 TV homes interviewed, 117 were watching TV.

Questions No. 1 and No. 2 were used as screening questions. The data presented is for all those who answered "Yes" to these two questions. The questionnaire appears below:

QUESTIONNAIRE

1. Do have have a TV set? Yes_____ No_____.
2. Is your TV set on now? Yes_____. No_____. (If no, discontinue interview.)
3. What programs are you watching?
4. How many men, how many women and how many children are watching? (Anyone under 18 years of age is considered a child.)
5. (To be asked individually of each person watching program:) Are you enjoying the program? Men_____. Women_____. Children_____.
6. Who in your family selected the program?

Pulse Sp. St. No. 555L6

UNITED STATES STEEL, APRIL 26

To be asked of views

1. Generally, which TV commercials do you like best?

Commercial	*Why?*
_____	_____
	_____
	_____
	_____
_____	_____
	_____
	_____
	_____
_____	_____

We would like to ask you a few additional questions about some TV personalities.

2. Have you ever seen these people deliver TV commercials? (Interviewer, show card with pictures and ask about each one separately.)

	Have seen	*Have not seen*
Betty Furness	( )	( )
Julia Meade	( )	( )
Kathi Norris	( )	( )
George Hicks	( )	( )
Mary Kay and Johnny	( )	( )
Rex Marshall	( )	( )
Jack Lescoulie	( )	( )

3. Which (of those that you have seen give commercials) do you like best? _____ Why? _____

(*a*) Which do you like second best? _____

Why? _____

(*b*) Which do you like the least? _____

Why? _____

4. Do you recall, seeing a kitchen commercial delivered by Mary Kay and Johnny during the course of last week's "United States Steel Hour"? This particular show was called "Roads to Home."

Recall May Kay and Johnny commercial_____ ( ) Do not recall May Kay and Johnny commercial_____ ( )

If recall Mary Kay and Johnny commercial in question 4, continue with question 5.

If do not recall Mary Kay and Johnny commercial in question 4, but, have seen Mary Kay and Johnny in question 2, continue with No. 6.

If have not seen Mary Kay and Johnny in question 2 and do not recall commercial in question 4, skip to question 10.

5. What do you remember about this commercial? _____

_____

6. How do you like Mary Kay? _____

Like very much_____ ( ) Dislike somewhat_____ ( )
Like somewhat_____ ( ) Dislike very much_____ ( )

(*a*) Why do you feel this way? _____

_____

(*b*) Would you like to make any other comments? _____

_____

7. How would you rate Mary Kay's presentation on each of the following points?

(*a*) (Interviewer: For each one rated "not so good" or "poor," ask why.)

	Excellent	*Good*	*Not so good*	*Poor*	*7(a). If "not so good" or "poor," why?*
General delivery_____	( )	( )	( )	( )	_____
Sincerity, believability_____	( )	( )	( )	( )	_____
Voice, manner of speaking_____	( )	( )	( )	( )	_____

8. How do you like Johnny?

Like very much_____ ( ) Dislike somewhat_____ ( )
Like somewhat_____ ( ) Dislike very much_____ ( )

(*a*) Why do you feel this way? _____

_____

(*b*) Would you like to make any other comments? _____

_____

9. How would you rate Johnny's presentation of the commercial on each of the following points?

(*a*) (Interviewer: For each rated "not so good" or "poor," ask why.)

	Excellent	*Good*	*Not so good*	*Poor*	*9(a). If "not so good" or "poor," why?*
General delivery_____	( )	( )	( )	( )	_____
Sincerity, believability_____	( )	( )	( )	( )	_____
Voice, manner of speaking_____	( )	( )	( )	( )	_____

10. Do you recall seeing a commercial during last week's program presented by George Hicks? Yes ( ). No ( ).

If "Yes" to question 10, continue with question 11.

If "No" to question 10 but "have seen" in question 2, continue with question 13.

If "have not seen" in question 2 and "no" in question 10, skip to classification data.

11. What do you remember about the commercial? _____

(*a*) What do you feel was the idea behind the commercial; that is, what idea was it trying to leave with you? _____

12. What did you think of this commercial? Favorable ( ). Neither favorable nor unfavorable ( ). Unfavorable ( )

(*a*) Why? _____

13. How do you like George Hicks?

Like very much_____( ). Dislike somewhat_____( ).
Like somewhat_____( ). Dislike very much_____( ).

(a) Why do you feel this way? _____
(b) Would you like to make any other comments? _____

14. How would you rate George Hicks' presentation on each of the following points?

(a) Interviewer: For each one rated "not so good" or "poor," ask why)

	Excellent	*Good*	*Not so good*	*Poor*	*14(a), If "not so good" or "poor," why?*
General delivery	( )	( )	( )	( )	_____
Sincerity, believability	( )	( )	( )	( )	_____
Voice, manner of speaking	( )	( )	( )	( )	_____

CLASSIFICATION DATA

Name_____
Address_____
City_____ State_____
Male ( ). Female ( ). Under 35 ( ). 35 to 49 ( ). 50 and over ( ).
Income: A ( ). B ( ). C ( ). D ( ).
High school ( ). Some college ( ). Completed college ( ). Some high school ( ).
Inter_____

Pulse Sp. St. 557L5

ROCK AND ROLL TV STUDY

PART I

1. Did you happen to watch television between 6:30 and 7 p.m. this past Saturday? Yes _____ No _____ (If no, go to pt. 2.)

2. Here is a list of programs which are presented each Saturday from 7:30 to 8 p.m. Which of these programs do you usually watch? (Enter below.)

3. Which of these programs did you watch this past Saturday between 7:30 and 8 p.m.? (Enter below.)

Ask for each program viewed this past Saturday

4. The last time this program was viewed (Saturday), which family members, including children watched it? (Record ages of adult males, adult females, and children 15 and under.)

5. Which family member selected this program?

Program	Question 2. Usually viewed	Question 3. Viewed Saturday	Audience composition		
			Males	Females	Children
Buccaneers					
Rock and Roll					
People Are Funny					
Other					

Program	Question 5. Member who selected (enter age)					
	Male head	Female head	Son (not head)	Daughter (not head)	Other male	Other female
Buccaneers						
Rock and Roll						
People Are Funny						
Other						

Ask viewer "Rock and Roll Show" questions 8 to13

Ask nonviewer of "Rock and Roll Show" questions 6 and 7

6. Before I showed you the program list, did you know that the "Rock and Roll Show" was on television between 7:30 and 8 p.m. this past Saturday? Yes____. (Ask question 7.) No____. (If no, end pt. 1)

7. Which one of these statements comes closest to describing why you didn't watch the "Rock and Roll Show"?

_____ A. Preferred watching some other program.
_____ B. Don't care for that type of program.
_____ C. Other family members don't like that type of program.
_____ D. Some other program was on that other member of family wanted to see.
_____ E. Just wouldn't watch that type of program.
_____ F. Parents would not allow child to watch that type of program.
_____ G. Other (specify)_____
_____ H. Don't know.

8. Which one of these statements comes closest to describing how you happened to watch the "Rock and Roll Show"? (Go to question 9.)

_____ A. Had it tuned to the station and left it on.
_____ B. Accidentally turned on the program.
_____ C. Other family member turned on the program.
_____ D. Program was listed in TV Guide, newspaper program listings, or other TV program listings or schedules.
_____ E. Recommended by friends.
_____ F. Saw or heard the program advertised.
_____ G. Wanted to change around and look at something different.
_____ H. Other (specify)_____
_____ I. Don't know.

Ask only those respondents who saw "Rock and Roll Show"

9. Do you think the whole idea of this program is better than, about the same, or not as good as other musical programs now seen on television? How do you think it compares to _____?
(Name of program)

Program	Better	Same	Not as good	Don't know
Dinah Shore Show				
Lawrence Welk Show				
Ozark Jubilee				
Perry Como Show				
Ray Anthony Show				
Top Tunes and Talent				
Voice of Firestone				
Your Hit Parade				

10. Now we would like to ask you a few questions about the individual performers. First, which of these performers do you remember seeing on the show? (Enter below.)

11. Of those performers you remember seeing on the show, which ones would you pay to see in a downtown theater, which would you go to see if there were no admission, which would you not want to see even if the admission were free?

	Remember seeing	Question 11		
		Would pay to see	See if an admission	Would not see if admission free
A. Guy Mitchell				
B. June Valli				
C. Martha Carson				
D. Dell-Vikings				
E. Sam "The Man" Taylor				
F. The Glovers				
G. "Screamin' Jay" Hawkins				
H. "Big" Al Sears				
I. Sal Mineo				

12. Do you happen to recall the name of the master of ceremonies on the program? Allen Freed _____. Other _____.

13. Do you think the master of ceremonies on the "Rock and Roll Show" contributed a great deal, a fair amount, very little, or not at all to your enjoyment of the program? A great deal _____. A fair amount _____. Very little _____. Not at all _____. Don't know _____.

PART II

1. We are conducting a study to find out about people's likes and dislikes for different types of music. In general, would you say you have a great deal of interest, a moderate amount, or little or no interest in music? Great deal _____. Moderate amount _____. Little or no interest _____.

2. Of the following types of music, which one do you like the most? Which one do you like the least? (For each type indicated by respondent, ask reason for liking or disliking.)

Type of music	Like most	Like least	Reasons
Classical, semiclassical			
Jazz			
Rock and roll			
Calypso			
Country			
Other (write in)			
Don't know, no favorites			

3. There are a number of programs on television this season that feature different types of music (concert, country, popular). Which of the following programs have you seen within the past month?

Programs	Viewed	Not viewed
A. Lawrence Welk		
B. Ozark Jubilee		
C. Perry Como Show		
D. Voice of Firestone		
E. Your Hit Parade		
F. None of these		

4. Of the five types of music listed on this card, which would you want to see more of on television, which would you like to see less of and which would you like to see in the same amount as at present?

Type music	More	Less	About the same	Don't know
Classical, semiclassical				
Jazz				
Rock and roll				
Calypso				
Country				

5. Would you look at this card and tell me which of these statements best describes your feelings toward a program featuring _____? (Probe for one answer from each of the three sets.)

	Classical, semiclassical	Jazz	Rock and roll	Calypso	Country
Ia. Entertaining, interesting					
Ib. Dull, uninteresting					
IIa. In good taste					
IIb. In poor taste					
IIIa. For the entire family					
IIIb. Particularly for adults					
IIIc. Particularly for teen-agers					
IV. Other comments				DK	

6. Which one of these statements would you use to describe an advertiser who would sponsor a program featuring _____?
(Type of music)

	Calypso	Rock and roll
A. Aggressive		
B. Progressive (pioneering)		
C. Responsive to public demand		
D. Not serving the public interest		

7. Would your attitude toward the product of an advertiser who sponsored such a program change? Yes _____. No _____.

Only ask if respondent indicates a change in attitude

8. Would you be more favorable or less favorable toward the advertised product?

Program type	Question 7. Attitude change	More favorable	Question 8. Less favorable	Don't know
Calypso				
Rock and roll				

Classification data

I'd like to ask you about the age of each household member. What is (this person's) position in the household?

	Age		*Age*
Male head	_____	Daughter (not head)	_____
Female head	_____	Other male	_____
Son (not head)	_____	Other female	_____

For respondent only

What was the last grade you completed in school?
(Record last grade completed) M_____. F_____. (Enter age)_____.
Economic status: Upper_____. Upper middle_____. Middle_____. Lower middle_____. Lower_____.
Name_____. Address_____. City_____. Inter._____.

JAPAN HOUR
PULSE Sp St 856C1

1. As you know, "The Japan Hour" is sponsored by Japanese manufacturers in order to acquaint Americans with some of the many products now being made in Japan, and with Japanese customs and culture. Are you, yourself, interested in such information? ( ) Yes. ( ) No. ( ) Noncommitals. (Skip to question 3.)
2. If "Yes" or "No": Why do you say that? _____
3. Do you happen to remember what (last night's) "Japan Hour" program was about? ( ) Yes. ( ) No. (Skip to question 8.)
4. What was the program about? _____
5. What was advertised on that program? _____
6. Would you say you found that particular program:

( ) Very interesting.
( ) More interesting than the average program.
( ) About as interesting as the average program.
( ) Not as interesting as the average program.
( ) Not interesting at all.

7. Why is that? _____
8. Within the past 6 months or so, have you bought any product or item that was made in Japan? ( ) Yes. ( ) No. (Skip to question 12.)
9. If "Yes": Please check below the products purchased.
10. What brands were they? Please check below.

Question 9. Product	*Question 10. Brand purchased*
( ) Food (canned goods).	_____
( ) Homefurnishings.	_____
( ) Gift items.	_____
( ) Sewing machines.	_____
( ) Pearls.	_____
( ) China.	_____
( ) Cameras.	_____
( ) Toys.	_____
( ) Other (specify).	_____

11. How do you think the items bought compare with same item of American manufacture? (Check below for each item purchased.)

	Better	Just as good	Not as good
HOMEFURNISHINGS			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
GIFT ITEMS			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
SEWING MACHINES			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
PEARLS			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
CHINA			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
CAMERAS			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
TOYS			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
OTHER			
A. Quality of material			
B. Quality of workmanship			
C. Design			
D. Price ( ) Lower. ( ) About the same. ( ) Higher.			
FOOD (CANNED GOODS)			
A. Quality			
B. Price ( ) Lower. ( ) About the same. ( ) Higher.			

12. In general, do you expect to pay more, less or about the same for merchandise imported from Japan, as compared with American-made items of the same quality? ( ) More. ( ) Less. ( ) Same (skip to question 14).

13. If "more" or "less": Why is that? _____

14. Do you remember any advertising about Japanese products or brands anywhere except on television? ( ) Yes. ( ) No. (skip to question 17).

15. If "Yes": Where was that advertising?

( ) Newspapers
( ) Magazines
( ) Direct mail
( ) Radio
( ) Billboards or posters
( ) Other (specify) _____

16. And what was being advertised?

17. Would you buy articles to give as gifts that are identified as made in Japan? ( ) Yes. ( ) No.

18. If no: Why not? _____
Name _____ Address _____
M _____ _____ Age ___ Monthly rent _____ City _____
Interviewer's signature _____ Date _____

3. Letter Dated June 18, 1958, From Stuart T. Martin, President of WCAX–TV of Burlington, Vt., Urging the Development of Standards for Audience Measurement by the Federal Government

WCAX–TV,
Burlington, Vt., June 18, 1958.

Hon. Warren G. Magnuson,
Chairman, Senate Commerce Committee, Washington, D.C.

Dear Senator Magnuson: I am delighted to hear that you are making an inquiry into the rating services for television and radio. There are persistent reports in the trade that none of these services are as completely objective as their importance to the industry would dictate.

A major problem seems to be that their acceptance is determined more by the quality of their sales staff than by any objective determination of their scope or accuracy. As of this moment the American Research Bureau has the greatest credence among most advertising agencies, with A. C. Nielsen being a close runner-up. However both of these services rely exclusively on diaries which are submitted by viewers who are solicited for the service. These viewers are paid nothing, and except for random telephone conversations, have little or no contact with the people for whom they are to do the reporting. As a result the raw data on which conclusions are based, is absolutely incapable of being checked. At the same time the third service, Pulse, which relies entirely on interviews, as to past viewing, has little or no acceptance for television. This seems remarkable because this method is the only one which offers at least an opportunity to check on the raw data by cross-examination of the interviewee. Why the service whose basic method appears to be inherently superior (in the light of our insistence on cross-examination for ascertaining the truth in our legal system) should be the one with the least acceptance is a matter which has often puzzled me.

My own training has been in the field of physical research. I received the degree of doctor of science in physics from the Massachusetts Institute of Technology in 1938 and practiced as a research physicist up until 1954 when I constructed this station. To a man with this background the outstanding defect of the present rating system is that there is no standard. That is to say, there is no way of knowing the relationship between the results produced by ARB, Pulse, Nielsen, and anyone else who might be in the field. From the standpoint of having any objective measure of audience you can see that this is a nearly fatal defect. Presumably all are measuring or attempting to measure the same thing. If we knew what the errors were in the various systems then there would no longer be room for argument among them. However the services vehemently resist any such suggestion. The reason is that they are primarily selling sales tools rather than bonafide measurement services. Furthermore, there is little opportunity for anyone else to enter the field without an extensive sales campaign, because no one in the industry has the means to ascertain whether the new methodology would be appropriate.

It has occurred to me that an industry involving some $2 or $3 billion of expenditures annually deserves a better basic measurement tool than these services provide. The National Association of Broadcasters has attempted to investigate this matter and did make some advances which unfortunately seem to have fallen by the wayside. I would like to suggest as a fruitful line of inquiry for your committee, investigation of why standards for rating services could not be established by a nationally recognized Government body. The one which first comes to mind is the National Bureau of Standards. The Bureau of Standards is for exactly that purpose. They have succeeded beyond all expectations in many important fields. Thus, we only buy one or two kinds of nuts and bolts. We know that the nuts we buy from one supplier will fit the bolts supplied by another. It is hard for me to see why this body, with its impressive record and august position, should not be able to establish a method-

ology which would give recognized results if followed. Under these circumstances, any responsible firm or body could undertake their own research with the assurance that they would have meaningful results.

If there is anything I can do to assist you in your inquiry please feel free to call upon me.

Sincerely,

STUART T. MARTIN, *President.*

4. LETTER DATED JULY 13, 1958, FROM MRS. DOROTHY C. BURGESS, COMMENTING ON THE PRESENT STATE OF TELEVISION PROGRAMING AND PROPOSING IMPROVEMENTS

SEASIDE, OREG., *July 13, 1958.*

Senator MIKE MONRONEY,
Senate Office Building, Washington, D.C.

DEAR SENATOR MONRONEY: Because television has become such a popular hobby, an answer to home entertainment, an alleviator of boredom, etc., I believe and I'm sure thousands will agree with me that the television industry should reevaluate the type of programs which are being contracted for in planning their coming year's programs.

The television industry is sadly losing its appeal because of the trashy crime-sex-murder-type programs, and even I am gradually reverting to radio and its pleasing musical programs. I believe the television industry is missing a wide-open field of entertainment and education by the lack of wholesome programing. What better service to humanity than to give the public a stimulating story of real life, a story that has a moral issue, or a comical incident applicable to the average citizen, a story worthy of intelligent discussion and a feeling that the audience was glad it had seen the movie or some particular program and would remember it. The Christophers program is a wonderful example, and truthfully, I would never miss that Sunday morning message. Also, there are many educational programs like "Meet the Press," "Edward R. Murrow Interviews," "Wide, Wide World," "Omnibus," and others which are superb, however there are far too few of these.

We are living today in a world held together by a very thin thread which if broken means complete destruction, or we can live in a world with a great future in science, human relations, and world betterment. The television industry reaches far more individuals than any other medium nowadays.

Is it any wonder juvenile crime as well as adult crime has reached such depths of degradation with parents showing no objections to the glorification and acceptability of all the crime and murder stories on TV. Indeed, the children clamor to watch all the murder mysteries since they are excitable stories, but consider how their little minds dwell on the criminal as each child lies in his bed prior to dropping off to a questionably restful sleep.

Campaigns have been started to clean up the comic-book industry, and now I believe it is high time to tidy up the television programs. I realize polls have been taken to get a cross section of opinions of the American public, however, I also realize some Americans are too lazy to think in terms of future generations.

I have tolerated television (and I know I can turn it off) for many years now, and not until recently have I really had any substantial complaint; however, when "Studio One," "Science Fiction Theater," "Climax," "Wide Wide World," and a few of the other outstanding programs are being canceled for substitutes like the various westerns, quiz shows, etc., which have no point at all, then I turn my television set off. Distinguished show people like Sid Caesar, Victor Borge, Jerry Lewis, and other talented artists are certainly a credit to any network.

It seems to me a balanced type of programing could be worked out like this: Thirty percent interdenominational religious and moral issues; 30 percent education; 30 percent entertainment; 5 percent westerns; 5 percent crime-murder (for those who can't stand to elevate themselves).

The schools are supposed to educate our children. Now, I believe it is high time to educate our adults—by television. Your writers would have a wealth of material both moral and educational from the Bible itself. The ever-popular science fiction or fact would always be well received. There is just a never-ending field for your writers if they could be told what services they could render to mankind and the great satisfaction they would realize in knowing

that their material was contributing to the mental, physical, and spiritual well-being of humanity.

In spite of all that is said about toll TV (and possibly that is the reason for all the rotten programs to "educate" the public that if programs get so bad, then they'll "pay" to see the "good" programs) it is wrong to expect payment for that which was originally intended to be free. I would far rather pay a little higher rate for my cable fee and have the freedom of choice I have now, than to have to pay a certain sum for the "good" programs. It could be a vicious circle, for as time goes by, those rates could be raised also and it is not fair to the less fortunate families whose television set is the only luxury they have and at least that luxury keeps their families at home and together.

Think, please, Senator Monroney, on this and give consideration to these thoughts since I am only one of millions of mothers who feel particularly the same as I, and someone such as you in the position you hold as a Senator in our Government is surely openminded on the subject which I have discussed.

The enclosed editorial is self-explanatory and was clipped from the Oregonian of July 13, 1958.

Yours very truly,

Mrs. Dorothy C. Burgess.

Enclosure 1: Copies sent to chairman of the board of directors, Columbia Broadcasting System, Inc., New York City; chairman of the board of directors, National Broadcasting Co., New York City; chairman of the board of directors, American Broadcasting Co., New York City; Mr. C. Howard Lane, chairman of television board, National Association of Broadcasters, KOIN–TV, Portland, Oreg.; Mr. Martin Manulis, producer, Columbia Broadcasting System, Inc., New York City.

P.S.—I have included your name, Senator Monroney, on the list to whom I wrote letters since I read "Rating the Raters" in the July 7, 1958, issue of Newsweek, so possibly you can refer this letter to the Senate Interstate and Foreign Commerce Committee, for which I thank you.

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5. Letter Dated July 20, 1958, From Wilton C. Haff Describing a New Electromechanical Device for Producing Measurement Data Without Probability Extensions

Pleasantville, N.Y., *July 20, 1958.*

Hon. Warren G. Magnuson,
U.S. Senate, Senate Office Building,
Washington, D.C.

Dear Mr. Magnuson: Last week, Wednesday, July 16, I had a telephone conversation with Mr. Nick Zapple in reference to the recently concluded hearings on television and radio research reports of various U.S. research corporations.

Mr. Zapple was of the opinion that I should make myself available for testimony because with the assistance of an electronics engineer I have come up with an electromechanical business machine device which accurately will produce factual tabulated data without probability extensions or estimates on television and radio sets condition of use.

Work on designing this equipment began in 1952 after several years of speculative planning. It was not until June of 1957 that we felt we could conscientiously report the existence of the device.

Prototypes can be created which will produce data answering all the questions and criticisms which have been currently and in the past attached to the

known reports of the several research organizations who reported on your recent hearings.

In describing the devices for purposes of prospectus I have written:

"Historically the record of television and radio program research and ratings have been confusing and irregular; so much so that they have invited the published criticism of metropolitan dailies and columnists as well as the mediums, its producers, and its talent.

"The attitudes of sponsors, their agencies, talent and program package producers, all agree that much depends on this research but because of its contradictions, variability between the different services and seeming unreliability stability in planned economics and selling the security of talent and long-term contracting in program procurement are practically impossible. These important factors in today's marketing are consistently "killed by a decimal point" and interpretation of data does not produce mathematically accurate marketing indicators because of distortion imposed through manual techniques of interpreting figures and the extension of data on a probability basis.

"Sample composition and interpretative techniques of the various research companies have ever been vague and closely guarded with much of the reported data being open to doubt and criticism. The human element of error combined with rule of thumb or academic license taken in extending figures creates error in final forms."

I would be happy to describe this device to you in detail. The following may suffice for the time.

The electronic-mechanical coupling serves to keep each TV or radio sample as a separate account and transmits whether the set is on or off and if on to what station the set is tuned, for how long and when shut off. This information is applied to a master card system which includes personal data of the home unit viewers or listeners: income, occupation, education, race, religion, numbers in the family, ages, etc.

Electronic readings will be taken on all programs during the hours specified. Program ratings will be reported on a local program status, national network with readings taken at 5-minute intervals throughout a 17-hour day. Ratings can be given on the hour, the half hour, quarter hour, 10- and 5-minute periods. Reports will contain cumulative data, average audience rating, and share of audience rating all expressed in terms effected by the family data in the preceding paragraph.

My business background covers some 28 years during which time I have been in radio, television, and agency advertising and marketing. I have bought a great deal of time on radio and directed purchases of TV commitments. Research, planning, execution, and tabulation plus interpretation are part of my stock in trade. I feel that research is only as valuable and useful as the ethics of the one who planned it and reported his findings.

I am not convinced that testimony on my part would be personally advantageous. I can assure you I can answer any and all questions which can be contrived. I have been most unhappy with the reported findings I have paid for in the past from leading research agencies. It was this dissatisfaction that prompted me to get into the design of the devices I mention here.

Because I was a resident of Seattle and formerly chief announcer for KOMO–KJR there and have followed your career these many years I would consider it a real privilege to make your acquaintance. Please let me know what disposition of these matters you consider proper.

Kindest personal regards.

Cordially yours,

WILTON C. HAFF.

COST of DEVELOPMENT
NIELSEN METER-BASED BROADCAST SERVICES* (U.S.A.)

COST OF LABORATORY RESEARCH (3 YEARS)	$ 67,270
COST OF PILOT OPERATIONS (4 YEARS)	422,782
LOSS ON COMMERCIAL OPERATIONS (16 YEARS)	9,844,199
RANGE OF ANNUAL LOSSES:	
$116,000 TO $1,323,000	
TOTAL LOSS TO 8-31-58**	$ 10,334,251
CAPITAL INVESTMENT	1,975,000
GRAND TOTAL	$ 12,309,251

*NRI, NTI & NSI
** INCLUDING ESTIMATES FOR LAST 4 MONTHS OF FISCAL 1958

FACTS ABOUT THE NIELSEN RESEARCH ORGANIZATION

1. Founded 35 years ago.
2. Largest in the world – by far – in
   (a) Marketing Research and (b) Audience Research.
3. Annual sales: $24,000,000 . (Audience Research = 22%).
4. Countries served: ELEVEN .
5. Employees (full-time): 3,500
6. Corporate clients (served continuously): OVER 1,000.
7. Annual fees per client: Up to $1,000,000
8. Client turnover, per year: 3 Percent .
9. Facts per year: 5 BILLION, Statistical Operations: 50 BILLION.
10. Facilities: (a) Capital: $5,500,000 .
    (b) Automatic Machines: 20,000.*
    (c) Buildings: 21 (Owned: 7; Leased: 14).

* INCLUDING ONE OF THE WORLD'S LARGEST I.B.M. INSTALLATIONS.

BASIC QUESTIONS ABOUT TV AUDIENCE RESEARCH

1. Integrity. (Is it subject to "influence"?)
2. Accuracy.
3. Practical effect:
   (a) On the public.
   (b) On TV artists, producers, etc.
4. Alternatives to Audience Research.

DIFFICULTIES IN TV AUDIENCE RESEARCH

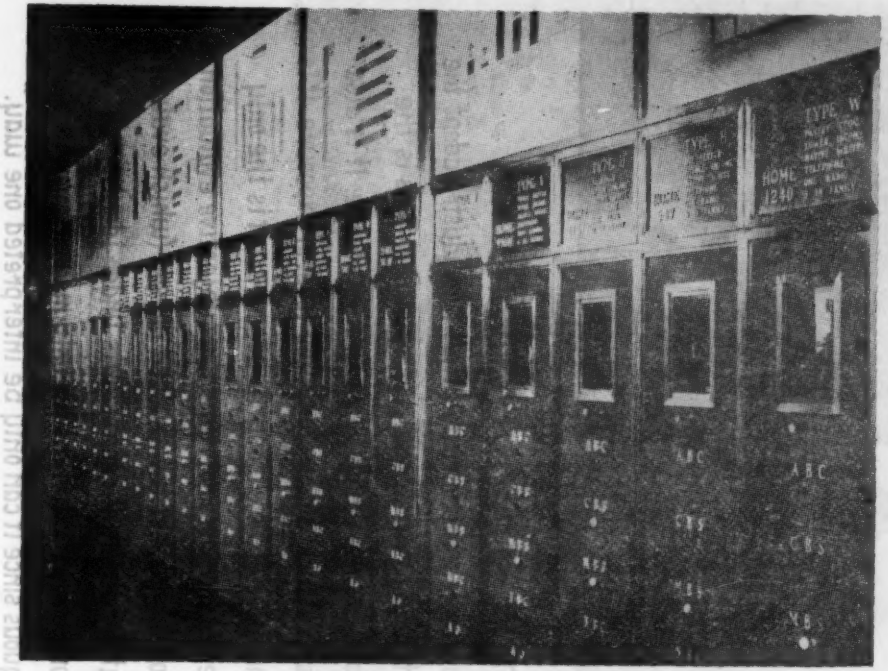
1. In the typical home:
   (a) There are 2 to 10 persons (including children)
   (b) They operate 1 or 2 TV receivers.
   (c) They view TV at all hours of the day and night.
   (d) They switch the dial among 2 to 8 or more stations.
2. An interview (by phone or in person):
   (a) Measures only a short period of time or Requires reliance on memory over a longer period.
   (b) May not cover all members of the family.
   (c) Is generally limited (by economics) to urban areas.
   (d) Depends on memory for early and late hours.
3. A diary:
   (a) Has difficulty in getting a true sample.
   (b) Generally involves errors and omissions that are*:
      (1) serious and (2) undetectable.

* THIS REFERS TO DIARIES WHICH ARE NOT CONTROLLED BY SOME AUTOMATIC DEVICE SUCH AS THE NIELSEN - DEVELOPED RECORDIMETER

TUNING *versus* VIEWING

"Your Committee recommends that the industry adopt the concept of tuning as its standard of exposure. This is the most objective of the various levels of exposure. It is also the simplest and most understandable level of exposure. It is the most inclusive of all exposure measures. It is the only measurement which does not require a subjective evaluation of some kind on the part of the exposed person (which evaluation is different for different respondents under identical exposure conditions). It is thus the only measurement which is unambiguous since it can only be interpreted one way."

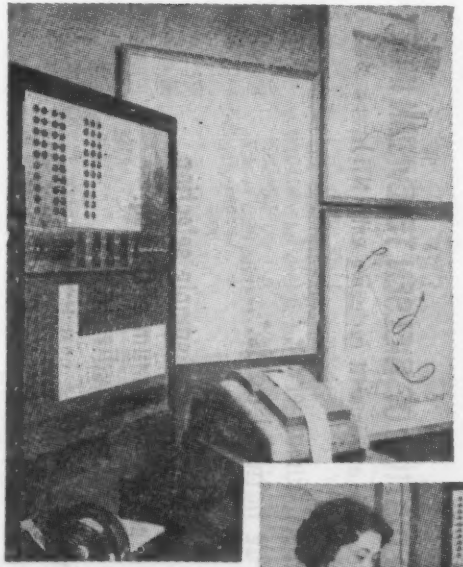
ADVERTISING RESEARCH FOUNDATION



OVER LEASED LINES, automatic telemetering equipment associated with the receivers in the homes, continuously positioned station styli on individual tape Audimeters® in the Central Office.

Crude by today's standards, the 1946 Instantaneous Audimeter nevertheless pioneered instantaneous metering of broadcast audiences.

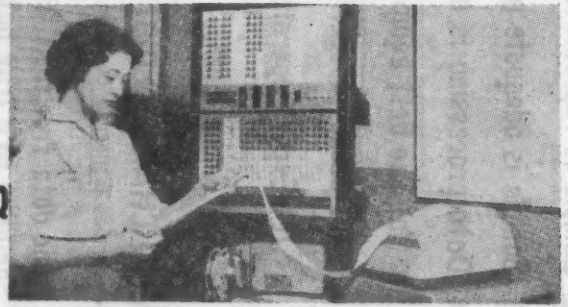
INSTANTANEOUS AUDIMETER, circa 1946



OPERATIVE in Chicago since summer 1957, the newest Instantaneous Audimeter® automatically compiles and prints out

- Homes Using TV
- Station Data

every minute, round the clock. And automatically compiles and prints out summaries every 15 minutes. Home-by home tuning data are preserved on a separate tape, for each minute.



Newest

INSTANTANEOUS AUDIMETER

(now in service)

NIELSEN TELEVISION INDEX IS ACCURATE

1. Audimeters produce accurate basic data.
   (Any defective records are automatically rejected)
2. Sample is representative.
3. Sample is adequate in size.
4. Data processing is accurate.
   (a) The best equipment
   (b) Sound procedures.
   (c) Expert operators.

MAJOR CHARACTERISTICS OF NIELSEN TELEVISION INDEX

(Each was pioneered by NTI - and is still exclusive with NTI)

1. Basic data free from human error.
2. Sampling on a true national basis.*
3. A fixed sample:
   (a) Permitting highly accurate sample selection.
   (b) Ensuring trends of maximum accuracy.
   (c) Measuring Cumulative Audience.
4. Diagnostic information, e.g.:
   (a) Minute-by-Minute Audience.
   (b) Audience Flow.
   (c) Audience by Market Divisions.
5. Measuring 4 weeks each month.
6. "Client Service" - for sound interpretation & maximum results.

*SUBJECT TO OMISSION OF MOUNTAIN TIME ZONE (ONLY 3% OF U.S. TV HOMES)

AUDIENCE SIZE (OR "RATING") IS THE COMBINED RESULT OF:

1. Program popularity.
2. Season of the year.
3. Day of the week.
4. Hour of the day.
5. Popularity of network.
6. Popularity of stations.
7. Number of stations.
8. Competing programs.
9. Preceding and following programs.
10. Promotion.

(The following material was received Feb. 20, 1959, from Trendex, Inc.:)

TRENDEX, INC.,
New York, N.Y., February 20, 1959.

Mr. NICHOLAS ZAPPLE,
Communications Counsel, U.S. Senate Committee on Interstate and Foreign Commerce, Capitol Building, Washington, D.C.

DEAR MR. ZAPPLE: Enclosed please find the information you requested some time ago on our tabulation and calculation procedure.

I am sorry for the delay, but we had been awaiting the arrival of the biographical material on Dr. Deming you had also requested. We now find that his office has sent this material to you under separate cover.

Cordially,

EDWARD G. HYNES, Jr., *President.*

Twenty cities are grouped as follows:

	Percent
Group I: New York	24.7
Group II: Chicago	15.3
Group III: Detroit, Philadelphia, Boston	19.8
Group IV: Cleveland, St. Louis, Dallas-Fort Worth, Baltimore, Minneapolis-St. Paul, Houston, Cincinnati, Washington	29.0
Group V: Kansas City, Indianapolis, Columbus, Atlanta, Denver, Omaha-Council Bluffs, Nashville	11.2

Arithmetic weights for group totals are applied. Percentages are obtained from total weighted calls.

Step I: Obtain base of TV homes from random sample.

Weighted random calls	1,902	Own TV (percent)	94.7
Random don't answer	280	TV calls	1,801
Random line's busy	167	TV don't answer	265
Watching TV	936	TV line's busy	158
Not watching TV	442	Watching TV	936
Own TV	1,378	Not watching TV	442
Don't own TV	77		

Apply 94.7 percent TV penetration figure to random don't answer and random line's busy to convert to TV homes as above right.

Step II: Calculate TV sets-in-use as follows:

$$\frac{\text{Viewing TV}}{\text{Viewing}+\text{not viewing}} \times \text{Lines busy}+\text{viewing TV}$$

Total TV homes called

Step III. Calculate share of audience as follows:

$$\frac{\text{Total program mentions}}{\text{Total viewing TV—Don't know program}}$$

Step IV. Calculate rating as follows: TV sets-in-use × share of audience.

×